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1 UNITED STATES DISTRICT COURT
2 SOUTHERN DISTRICT OF NEW YORK

3 UNITED STATES OF AMERICA,

4 v.

23 Cr. 10 (AS)

5 AVRAHAM EISENBERG,

6 Defendant.

Trial

7 -----x
8 New York, N.Y.
9 April 10, 2024
8:55 a.m.

10 Before:

11 HON. ARUN SUBRAMANIAN,

12 District Judge
13 -and a jury-

14 APPEARANCES

15 DAMIAN WILLIAMS,

16 United States Attorney for the
Southern District of New York

17 PETER J. DAVIS

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25 BY: MICHAEL BURSHTTEYN

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APPEARANCES (continued)

Also Present: Brandon Racz, FBI
Ryan Sears, Paralegal Specialist-USAO
Jonathan Oshinsky, Paralegal Specialist-USAO

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(Trial resumed; jury not present)

THE COURT: All right. First question is on the Mango Labs issue. Is there any reason why we need to handle that in the limited time that we have right now or is that something that we could pick up before the mid-morning break?

MR. GREENSPAN: Your Honor, that can wait till the mid-morning break.

THE COURT: Okay.

MR. GREENSPAN: Thank you.

THE COURT: All right. So let's talk about which exhibits should we handle first?

MR. TALKIN: Your Honor, I can speak to the DX-30 series.

At this point in time, we've discussed it with the government, we're looking into some issues. I'm not going to ask any witnesses today about that; so we can table that and we'll discuss with the government. I think it's going to be a yes or a no that we probably can agree on. So we'll let the Court know as soon as we resolve it.

THE COURT: Progress.

MR. TALKIN: That's why I wanted to tell you about that.

THE COURT: Good. I like to start off on a high note.

On the defense's side, there were the FTX and other terms of service; in addition, the FTX documents. Are those

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1 issues that we need to take up now? I'm happy to address them.

2 MR. BURNETT: So they won't come up before the break,
3 but they'll come up today. So if we have some time, it's
4 probably best to do it.

5 THE COURT: That's why we're here.

6 Mr. Klein or whoever wants to address it from the
7 defense side.

8 MR. KLEIN: Yes, your Honor. I'm going to address the
9 terms of service.

10 We understand the government intends to call an FBI
11 agent to try to put in the terms of service for FTX and
12 Jupiter. And there's some related arguments to the FTX
13 documents in general. But with those documents, we're not
14 sure, for example, with Jupiter, which our client did not --
15 there's no evidence that I'm aware of that he signed those
16 terms of service, I understand they were terms of service
17 between Mango Labs and Jupiter. And so we're not sure about
18 the relevance, and there's also a 403 issue.

19 And then in addition, I would just say, you know, this
20 is an agent who I understand -- I'm guessing she went on the
21 website or something. I actually didn't see the 3500 till now.
22 It wasn't -- this was an exhibit, they disclosed their input
23 through her last night. So I'm not sure her basis for offering
24 this in. So that's one for the Jupiter terms of service.

25 THE COURT: Okay. So let's start with that. That's

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1 GX-851, Jupiter terms of service.

2 Mr. Burnett or Mr. Davis?

3 MR. BURNETT: Sure.

4 So for the Jupiter terms of service, I think the
5 relevance there is similar to the relevance that we have
6 discussed for the other terms of service, which there is one
7 way in which terms of service can be relevant as to
8 Mr. Eisenberg's intent. But the terms of service are also
9 relevant as to what people in the various markets thought was
10 going to be happening or going to be allowed on the various
11 trading platforms that Mr. Eisenberg used to carry out the
12 scheme.

13 So just to kind of recap how this works, the Mango
14 pricing oracle that sets the price for the perpetual drew from
15 three sources. One of those sources was FTX, one of those
16 sources was AscendEX, and the third source was something called
17 Serum DEX. And one way that people can trade through Serum DEX
18 and the way that the evidence will show Mr. Eisenberg did it
19 was through a function -- a platform called Jupiter Aggregator.

20 So just with the AscendEX, how the AscendEX terms of
21 service were relevant for how people who would be using Mango
22 Markets relying on that pricing oracle would understand the
23 kind of inputs that would be going into that oracle and whether
24 those inputs would be manipulated or not. The Jupiter
25 Aggregator terms of service are also relevant for whether

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1 people would expect that the inputs for the oracle would be
2 manipulated or not.

3 THE COURT: Okay. How are you getting this into
4 evidence?

5 Let me pause.

6 So with Mr. Farrell, you got it in because Mr. Farrell
7 was affiliated with AscendEX, and so he had -- he could lay a
8 foundation for entering in the terms of service for that
9 platform. And you went through that in great detail with
10 Mr. Farrell. How are you going to do that with these other
11 terms of service?

12 MR. BURNETT: Well, so for Jupiter Aggregator, the
13 foundation is that the terms of service are available on the
14 website for people to see, because that's what their relevance
15 is, is that they are publicly available for people to see them.
16 So that's what the FBI agent with respect to Jupiter Aggregator
17 will testify, that these are terms of service that are publicly
18 available for people to see and here's what they are.

19 THE COURT: But you don't have any evidence that
20 Mr. Eisenberg would have been required to agree to them or
21 anything of that kind that you had with AscendEX.

22 MR. BURNETT: So as to the Jupiter Aggregator one,
23 that is correct. But, again, there were two ways in which
24 terms of service can be relevant. One is as to whether
25 Mr. Eisenberg had to agree to them, and that goes to his

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1 knowledge and intent. And the other is as to market
2 expectations as to how these platforms that feed into the
3 oracle would function and whether they would be subject to
4 manipulation or not. So it's that second purpose that the
5 Jupiter Aggregator information comes in for.

6 THE COURT: Okay.

7 Mr. Klein, is your objection on relevance grounds or
8 what's the nature of the objection?

9 MR. KLEIN: Foundation, relevance, the probative
10 value. They don't even have a witness to say that anyone else
11 saw these terms. Almost everybody's terms of service, even
12 AscendEX, are publicly available. So I'm not sure how this
13 comes in, just some witness getting in and saying, These are
14 publicly available terms of service. Then they are going to
15 get up and argue that the market knew about these. There's no
16 witness to say that.

17 So they need to call someone from Jupiter or someone
18 from Mango Labs or somebody who saw these to put them in;
19 otherwise, they are just -- they can just put FBI agents up all
20 day to put in things that are on publicly available websites.

21 THE COURT: How is the FBI agent going to establish
22 that these were available and in use in October of 2022?

23 MR. BURNETT: This is a little different for the FTX
24 and the AscendEX stuff -- sorry, FTX and the Jupiter Aggregator
25 terms of service.

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1 So as to Jupiter Aggregator, the agent saw them in
2 connection with preparing for this case. And there's a date on
3 the terms of service which predates October of 2022; I think
4 it's May 2022. So that's how the person would establish it.

5 THE COURT: And that's for Jupiter?

6 MR. BURNETT: That's for Jupiter.

7 THE COURT: What about -- FTX is going to come in
8 through an FTX witness?

9 MR. BURNETT: No, so FTX will also come in through
10 that agent.

11 THE COURT: So same agent who looked at it in
12 preparation for this trial --

13 MR. BURNETT: So that's actually a little different.
14 So in that case, the FBI agent actually looked at the terms of
15 service in early November '22, so just a couple weeks after the
16 attack. Because she was doing an investigation related to FTX
17 and went on to the website and downloaded the terms of service
18 in connection with that.

19 THE COURT: Okay. So GX-851 is -- the defense's
20 objection is sustained.

21 As to GX -- which is the FTX terms of service? What's
22 the number?

23 MR. BURNETT: It's 1236.

24 THE COURT: Okay. So as to GX-1236, I'll hear an
25 objection based on whether there's an adequate foundation laid

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1 for introducing that document into evidence. But I think that
2 based on the government's submission at this point, there is a
3 closer question as to whether it would -- there is going to be
4 a basis to say that this was available and would be applicable
5 to users of the FTX platform at the time of the offense. And
6 to the extent that the defense has cross-examination that would
7 poke holes in that theory, they'll be able to raise that in
8 cross-examination. And so it would seem to go to the weight as
9 opposed to the admissibility of that document, understanding
10 that Mr. Eisenberg used that platform, under the government's
11 theory, in connection with these events.

12 What about Switchboard, which is GX-872?

13 MR. BURNETT: So Switchboard, there's a witness from
14 Switchboard, he's the CEO, who will testify that the terms of
15 service were publicly available on the Switchboard website.

16 Switchboard is the entity that runs the oracle that
17 Mango Markets used and create -- this person helped create the
18 oracle that Mango Markets used. And they had terms of service
19 that he will testify were in place at the time of the event
20 that prohibited misusing the oracle, feeding it bad
21 information, that sort of thing.

22 THE COURT: Is this similar to AscendEX or it's a
23 little bit different, because Mr. Eisenberg did not directly
24 use Switchboard, it's just that his -- the conduct was -- went
25 through the Switchboard given that it was operating the oracle?

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1 MR. BURNETT: Well, both conduct went through
2 Switchboard and we can put this in through like a later
3 witness. He visited the Switchboard website a number of times
4 in preparation for the attack. And part of the terms of
5 service say it applies to both flex Switchboard partners and to
6 people who use and visit the website.

7 THE COURT: Mr. Klein, as to the Switchboard terms of
8 use, this would seem to be more similar to the AscendEX issue.
9 There may be a foundation issue, but there doesn't seem to be
10 one at this time because the government will have a witness
11 from Switchboard to put in the document and say that it was
12 available and on the website at the time of the alleged
13 offense.

14 MR. KLEIN: Your Honor, my colleague Mr. Greenspan is
15 going to address this one.

16 THE COURT: All right. You're going to phone a
17 friend. Mr. Greenspan.

18 MR. GREENSPAN: Sorry, your Honor, to jump around like
19 this.

20 I think your Honor has anticipated our objection,
21 which is -- I guess the first part of it is that the document
22 is undated. Perhaps they can establish that it was actually in
23 place at the time, but it's not apparent from the face of the
24 document.

25 The second objection is that it applies to users. The

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1 definition of "users," you know, clearly does not include
2 Mr. Eisenberg, who wasn't a party to the contract. And so if
3 there's a foundation that they establish later that he actually
4 saw this document or somebody else saw it and relied on it, we
5 haven't seen that and we haven't gotten a proffer for that
6 previously.

7 So for it to come in today through a witness who
8 doesn't have that foundation, you know, and if that foundation
9 is never laid, I think that document should have been excluded.

10 THE COURT: Okay. Well, we'll see what foundation is
11 laid for the document; and I'll hear an objection at that time,
12 if there is one.

13 MR. GREENSPAN: Thank you.

14 THE COURT: Okay. So we'll reserve on GX-872.

15 What else?

16 MR. BURNETT: I think there is the all FTX objection,
17 which I don't really understand the basis for so I won't try
18 and address it.

19 THE COURT: Well, the email to the Court did not have
20 a stated basis. So what is the basis?

21 MR. GREENSPAN: We discussed the basis with the
22 government last night, apparently not effectively, so I'll try
23 again.

24 The initial objection is the reliability of all of the
25 documents. And we explained to the government that that was

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1 based on the trustee's report filed in bankruptcy court for the
2 District of Delaware, which essentially found that -- I'll try
3 to quote here.

4 The debtors -- in this case this is FTX -- found a
5 pervasive lack of records and other evidence at -- or, sorry,
6 that's -- The debtors found a pervasive lack of records and
7 other evidence at FTX, at the FTX group. Also said that there
8 was a lack of adequate recordkeeping and extensive commingling
9 of assets.

10 That that same report -- and this is dated April 9th,
11 2021 -- found that the FTX group lacked any internal audit
12 function whatsoever. And it goes on and on basically to talk
13 about how unreliable their records are.

14 And so when the government asked us to stipulate to
15 the authenticity of these records several weeks ago, we weren't
16 willing to do that because we didn't believe them to be
17 authentic.

18 MR. BURNETT: I can address that, your Honor.

19 So a few things. So first of all, we're going to have
20 a witness from FTX who will testify that the documents are
21 authentic.

22 Second, as to the trustee report, first, what the
23 trustee was dealing with was like the corporate finances of FTX
24 and, like, where the FTX money was. Because it was dealing
25 with this in the context of the bankruptcy and, like, what was

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1 a corporate expense, what wasn't a corporate expense, like
2 where did the money go. The records that we are offering here
3 just about, like, registration, user accounts, and like the
4 transactions that those accounts made. So I don't think --
5 even accepting that this trustee thing is even plausibly
6 relevant, I don't think it's a basis to exclude the testimony
7 on authenticity from the witness from FTX who actually looked
8 at these documents and can testify as to their authenticity.

9 And finally, this is, like, pure hearsay. If they
10 want to call Mr. Ray to testify in the defense case about how
11 FTX's recordkeeping is bad, they are free to do that. But
12 that's not a reason to prevent the documents from coming in.

13 THE COURT: I agree with the government at this time.
14 The objection that is made does not warrant a blanket finding
15 by the Court that these documents are inadmissible. We'll see
16 whether an adequate foundation is laid and whether there is --

17 MR. GREENSPAN: Your Honor, that applied to all of the
18 documents. There are objections specifically to two of the
19 exhibits.

20 THE COURT: Okay. So no blanket objection. We'll
21 hear what the evidence is. You can object to particular
22 documents at the time that they are offered to be admitted.

23 So what are the particular objections you have?

24 MR. GREENSPAN: At least with respect to GX-1218 and
25 GX-1219, these are spreadsheets that include accounts -- a

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1 number of accounts that are unrelated to any of the activity in
2 this case. And it seems the government -- I mean, as far as we
3 can tell, I don't know if this is exactly true, but it seems
4 that the government intends to use these to show that
5 Mr. Eisenberg used other accounts at other times for other
6 things. That for us raises a 402 and 403 objection because
7 it's not relevant. And it seems to also raise a 404(b)
8 objection because these are other bad acts that weren't
9 disclosed.

10 I'm sorry about the mic.

11 THE COURT: Mr. Hernandez, can you take a look at
12 that.

13 THE DEPUTY CLERK: Yes, your Honor.

14 THE COURT: Mr. Burnett?

15 MR. BURNETT: Yes. So that's just not what we're
16 using these for.

17 So basically, the way FTX produced the data to us had
18 the bochen.clean account, which is one of the accounts that was
19 used in the attack. It had a number of accounts that were in
20 Mr. Eisenberg's own name. And then it had some other accounts
21 that were in it, as well, that, like, candidly, I'm not totally
22 sure why FTX included in there.

23 We are going to use the documents and the data as to
24 the bochen.clean account which was involved in the attack, and
25 to show that Mr. Eisenberg had other accounts on FTX, but not

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1 to assert or claim that Mr. Eisenberg was using other accounts
2 that were not in his own name.

3 Yes, the fact there are other accounts on there, those
4 accounts are not relevant to the case, but there's no prejudice
5 because we have no intention of using any of that. And like
6 there's no workable solution short of us like starting to
7 delete rows from what FTX produced, which I don't think would
8 be appropriate and certainly not like the right type of
9 objection to raise like when we're about to put the witness on.

10 THE COURT: You could redact the other lines.

11 MR. BURNETT: So it's like a spreadsheet that you have
12 to like filter around to get down to the ones that we're going
13 to use. I don't think you practically can redact them.

14 THE COURT: I think you can redact spreadsheets.

15 But let me ask Mr. Greenspan.

16 MR. GREENSPAN: At the very least, with regard to one
17 of the spreadsheets, the KYC data, I think that's just not the
18 case. This was our suggestion to the government in our
19 discussions last night. And should they do that, we would
20 withdraw the objections. I mean, we don't object to the use of
21 this data as far as it relates to the bochen.clean address.

22 THE COURT: I've received many redacted spreadsheets.

23 MR. BURNETT: Your Honor, it's one thing to get a
24 request to redact a spreadsheet; it's another to get a request
25 to react a spreadsheet at 10:30 the night before someone's

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1 about to go on to put this in. These are, like, not easy
2 spreadsheets to redact. I don't know how to do it on the fly.

3 THE COURT: Well, you had the request.

4 MR. BURNETT: We had the request at 10:30 last night
5 for the first time.

6 THE COURT: As far as I can tell, there have been a
7 lot of things happening at 10:30 in the evening like on both
8 sides. It's just that, look, like some of these documents are
9 getting produced the night before they are going to be used.
10 And so there was a suggestion apparently from counsel to redact
11 the spreadsheet.

12 MR. DAVIS: Judge, may I be heard on this?

13 THE COURT: Of course.

14 MR. DAVIS: The Court and defense counsel have had
15 these spreadsheets far in advance of last night. They have not
16 raised this specific objection until 10:30 last night.

17 I would be more than happy to confer with them about
18 redacting the spreadsheets. The problem is we have a witness
19 who flew from out of town who is putting these exhibits in
20 today. So it's a huge mechanical issue for us to redact them
21 in real time on the fly.

22 THE COURT: You don't have to do that.

23 What about this: You can offer the exhibit and it
24 will be admitted on the understanding that you're not going to
25 focus the jury's attention on these other lines. And then

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1 after that, the parties can stipulate that the document, to the
2 extent it's requested by the jury, will be one that has a
3 redaction. That way it gives you time to deal with the issue.

4 MR. DAVIS: 100 percent agree to that.

5 THE COURT: Okay.

6 MR. KLEIN: Likewise. Thank you, your Honor.

7 THE COURT: Anything else from the FTX series?

8 MR. GREENSPAN: No, your Honor.

9 THE COURT: I don't believe there's anything else from
10 the government's side because you're going to talk about the
11 defendant's exhibits that are in the 30 range.

12 MR. DAVIS: Yes, your Honor.

13 THE COURT: Okay. Anything else from either side
14 before we get started?

15 Okay. Mr. Hernandez, please bring in the jury.

16 THE DEPUTY CLERK: Yes, your Honor.

17 (Jury present)

18 THE COURT: Welcome back for day three.

19 I am delighted to tell you that I believe we are still
20 on track. I'm not going to say that we're ahead of schedule
21 because the ultimate jinx -- if I say it, then we're going to
22 somehow get off track. But we are on track at least.

23 So thank you for all your hard work thus far. And I
24 will say that the Court has been pleased with how attentive the
25 jury has been in the case. And I know that the parties on both

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Jain - Direct

1 sides really appreciate it. So thank you again for your
2 continued service here.

3 So without further ado, let's get started.

4 Mr. Burnett, please recall Mr. Jain to the stand.

5 MR. BURNETT: Yes. The government recalls Mr. Jain.

6 THE COURT: Welcome back, Mr. Jain.

7 THE WITNESS: Thank you, your Honor.

8 THE COURT: And you understand you are still under
9 oath?

10 THE WITNESS: Yes, your Honor.

11 THE COURT: Okay. Mr. Burnett, you may begin.

12 KAPIL JAIN,

13 called as a witness by the Government,

14 having been previously duly sworn, testified as follows:

15 DIRECT EXAMINATION (continued)

16 BY MR. BURNETT:

17 Q. Good morning, Mr. Jain.

18 Just take a minute to get yourself settled in there.

19 A. Good morning. Thank you.

20 Q. No problem.

21 All right. So yesterday where we left off, you were
22 testifying about perpetual contracts; correct?

23 A. Correct.

24 Q. And just to briefly recap, what are kind of the key sources
25 that are value in those perpetual contracts?

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Jain - Direct

1 A. Well, I would say there's one value source that's the
2 relative value of the price changes of the currency pair
3 referenced in the perpetual contract.

4 There's a second source of value called the funding
5 payments, which are related to the differences in the oracle
6 price and the mid price on the order book. And that acts as a
7 second stream of economics.

8 And then there's also others that we touched on,
9 settlement and others.

10 Q. All right. So I want to switch gears away from perpetuals
11 now.

12 Are you familiar with something called Mango Markets?

13 A. I am.

14 Q. How are you familiar with it?

15 A. In my research for the preparation for this matter.

16 Q. And in connection with this case, have you analyzed certain
17 economic issues related to features on the Mango Markets
18 platform?

19 A. I have analyzed some of the functionality of the Mango
20 Markets platform, yes.

21 Q. All right. So what is Mango Markets?

22 A. So Mango Markets is a decentralized exchange.

23 Q. What does that mean again?

24 A. So it's a place where users can go - I don't mean a
25 physical place, a digital place. It's a digital place where

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Jain - Direct

1 users can go to do cryptocurrency trades. And unlike
2 centralized exchanges, like we talked about Fidelity or
3 Robinhood or Coinbase, Mango exists as a decentralized
4 exchange, as a smart contract on a blockchain.

5 MR. BURNETT: All right. So let's pull up, Mr. Sears,
6 for everyone Government Demonstrative 1823.

7 Q. Are you familiar with something called the Mango token?

8 A. I am.

9 Q. What is the Mango token?

10 A. The Mango token is a governance token that's associated
11 with the Mango project.

12 Q. Can you describe what you mean when you say it's a
13 governance token in this context?

14 A. Sure. So it's a token, much like the other sorts of tokens
15 that we've talked about: Stablecoins, other sorts of tokens.
16 Governance tokens are another category of tokens. They can be
17 traded; one can purchase them.

18 And it's unique in that governance tokens typically
19 give the holder of a token the right – not the obligation, but
20 the right – to vote or have a say in how a project like Mango,
21 for example, is run. So on occasion there might be decisions
22 that token holders must make about the operations, the rules
23 and so forth.

24 And in addition, projects such as Mango have
25 treasuries, which are pools of capital that are dedicated to

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Jain - Direct

1 furtherance of the projects. And token holders typically have
2 a vote on how that money is used.

3 Q. So let's switch from the Mango token to what people could
4 do on the Mango Markets platform.

5 A. Sure.

6 Q. What are some types of trading that people could engage in
7 on that platform back in 2022?

8 A. Well, an example would be perpetual trades.

9 Q. And were there futures beyond trading that Mango Markets
10 advertised in 2022?

11 A. Yes. So beyond just the trading, there was other features
12 associated with the Mango platform related to funding and
13 financing, the ability to borrow against your assets and other
14 sorts of funding features.

15 Q. All right. So let's focus on one of those. You mentioned
16 that Mango Markets allowed borrowing; correct?

17 A. Correct.

18 Q. At a high level, before we get to Mango in particular, what
19 is borrowing on a cryptocurrency exchange?

20 A. So borrowing on a cryptocurrency exchange is essentially
21 kind of like taking out a loan against the value of the assets
22 that you have in your account. And so borrowing is just the
23 vernacular that's used in this particular example.

24 But, you know, it's somewhat analogous to say a home,
25 where the house is your collateral, and you take out a

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Jain - Direct

1 mortgage. So it's essentially a type of collateralized
2 lending. You're taking out a loan and you're putting up
3 collateral against -- you're borrowing against that asset.

4 Q. So let's turn to borrowing on Mango Markets in particular
5 now. What does borrowing on Mango Markets entail?

6 A. So borrowing on Mango Markets entails, number one, putting
7 an asset into your account, and that asset acts as the
8 collateral that you can borrow against. So you need to have a
9 sufficient amount of assets, number one, that you deposit in
10 there to support your borrowing.

11 Number two, these are crypto assets, so they might
12 change over time in value. And so you need to have enough
13 maintenance collateral to keep your account in a positive
14 balance or positive health, they call it. So you'd have sort
15 of an initial amount -- a sufficient amount of assets; you need
16 to continuously keep a sufficient amount of assets.

17 Three, just like any loan, like your mortgage payment
18 or any other loan, you got to pay the interest.

19 And then finally, when you pay back the money, you
20 have to repay the principal.

21 So I would say, in summary, those are four elements of
22 the borrow functionality.

23 Q. Now, is there a particular deadline by which people have to
24 repay?

25 A. No. So, you know, unlike a mortgage -- and again, this is

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Jain - Direct

1 just analogy, it's not exactly like a mortgage. But unlike a
2 mortgage, where you might have like a 10-year, a 30-year
3 mortgage, the character of these types of borrowings are
4 continuous.

5 Q. From your experience, are there similar types of continuous
6 borrowing arrangements in the traditional finance space?

7 A. Sure. So, I mean, we talked about mortgages; but mortgages
8 have typically a 10-year or a 30-year, at least in this
9 country.

10 There are other similar concepts. For example, if
11 folks have ever tried maybe like a Fidelity account or a
12 Robinhood account, there's this notion in traditional
13 securities of margin. So if you have, let's say, \$100 of
14 stocks, Fidelity might actually allow you to purchase \$120 or
15 \$150, because they are lending you 20 or \$30 or 40, \$50 in a
16 margin account, which is different than a cash account.

17 So I would say margin in traditional securities is
18 another example. And in that example, there's no end date; you
19 sort of keep your margin loan outstanding until such time as
20 you close out your positions.

21 Q. All right. So let's take a look at some of the materials
22 from Mango Markets and walk through the economic concepts.

23 I'd like to show you what's been marked and is already
24 in evidence as Government Exhibit 1011.

25 Do you recognize this document?

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Jain - Direct

1 A. I do.

2 Q. What is it?

3 A. This is the Mango Markets user guide that talks about how
4 things like borrow and other functions on the platform work.

5 MR. BURNETT: Let's go down to page 78, please,
6 Mr. Sears.

7 Q. And do you see there's a big section here labeled borrowing
8 and lending?

9 A. I do.

10 Q. All right.

11 MR. BURNETT: And actually, Mr. Sears, if you wouldn't
12 mind highlighting the section below that's called: "Don't
13 sell, just utilize," and the paragraph that goes with that.

14 Great.

15 Q. Could you please read the second sentence of this for the
16 jury?

17 A. Sure.

18 Under the hood, the Mango Markets risk engine permits
19 users to take out fully collateralized loans against any
20 deposited assets, and deposits into you -- it should be "your"
21 Mango Markets account accrue interest every second.

22 Q. Does the phrase "fully collateralized loans" have a meaning
23 in finance that you're familiar with?

24 A. It does.

25 Q. What does it mean?

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Jain - Direct

1 A. So a fully collateralized loan is a loan that you take out
2 against the value of an asset. So similar -- if you go back to
3 our mortgage example, you can borrow up to the value of your
4 house, but you can't go further. That would be unsecured after
5 that.

6 So a collateralized loan means you can borrow against
7 collateral. And oftentimes you can't borrow all the way up to
8 a level of your collateral, there's some amount of discount.
9 But it typically refers to loans that are backed by collateral.

10 Q. All right.

11 MR. BURNETT: Mr. Sears, if you could minimize what we
12 just saw here, and let's blow up the part that says "Borrowing
13 on Mango Markets," in the sentence below that.

14 Q. All right. Now, let's walk through some of these steps of
15 borrowing. Could you read the first sentence here.

16 A. Sure.

17 "First, ensure assets are deposited into your margin
18 account for use as collateral."

19 Q. Sorry. If you could read the second sentence as well.

20 A. "Then, simply click 'withdraw' under the accounts tab or
21 'borrow' under the borrow tab."

22 Q. So what's the relationship between the amount of assets
23 that someone has on Mango Markets and the amount that they can
24 borrow?

25 A. Well, I would say that the amount that you can borrow might

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Jain - Direct

1 vary, all else being equal with the assets. But just as a
2 general rule, it's a fair statement to say that the more assets
3 that you deposit – the more cryptocurrencies, tokens, what have
4 you, that you deposit into your account – the more that permits
5 you to borrow because you have more collateral and more
6 reserves to borrow against that.

7 Q. Now, does this user manual have an example of borrowing in
8 it?

9 A. It does.

10 Q. All right. So let's go through that.

11 MR. BURNETT: Mr. Sears, if you can minimize this, and
12 let's turn to the next page.

13 Q. Now, you see at the top it says: "The UI will prompt you
14 to select the assets that you wish to withdraw and borrow, and
15 toggle borrow funds on." Do you see that?

16 A. I do.

17 Q. Do you see there's a screen in the middle here?

18 A. I do.

19 Q. Could you explain what type of action that this screen is
20 depicting happening here?

21 A. Sure. So this would be a screen that a trader or a user on
22 Mango might see. If the user desires to withdraw funds and, in
23 particular, they're requesting to withdraw – you can see by the
24 amount here – 100,000 USDC. So USDC is, as you recall from
25 yesterday, the stablecoin that's issued by Circle. So they're

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Jain - Direct

1 essentially seeking to take out a loan and withdraw – borrow –
2 100,000 USDC against the value of their account.

3 Q. Now, if you could look down under the image, do you see
4 there's some text there?

5 A. Yes.

6 Q. Could you read the first two sentences of that?

7 A. So "Next, determine the amount that you would like to
8 withdraw. Remember, borrowing funds affects your collateral
9 ratio and leverage calculation."

10 Q. Does that phrase "collateral ratio" have a meaning in
11 finance?

12 A. Yes.

13 Q. What is a collateral ratio?

14 A. Well, essentially, it's a measure of how much assets you
15 have, how much collateral you have, relative to harm, how much
16 you've borrowed against it. And so collateral ratio is
17 something to keep track of in your account and, at times, the
18 collateral ratio might get to a sufficient level that you can
19 no longer borrow anymore safely.

20 Q. So to keep a loan open on Mango Markets, what do users need
21 to do with their collateral ratio?

22 A. Well, they need to manage it to keep it in bounds.

23 Collateral ratio ends up being displayed to the user in another
24 form called health, as well, the health ratio. And essentially
25 it's meant to say, how safe is it for your account to withdraw

O4AVEIS1

Jain - Direct

1 the money that you're proposing to withdraw. And if there's
2 not enough assets, it will be less safe; and if there's
3 sufficient assets, then it would be more safe.

4 MR. BURNETT: So let's go down, Mr. Sears, to page 81,
5 please. We're skipping page 80 and going to 81.

6 All right. And if you could zoom in on this "confirm
7 withdraw" image.

8 A. Yes.

9 Q. What is this image here?

10 A. So this would be the screen right after the prior screen,
11 where the user has entered into the transaction, this 100,000
12 in the prior screen, clicked "okay," and then this is a window
13 that asked the user to confirm once again the terms of the
14 loan, the withdraw that they're proposing. So they are about
15 to withdraw 100,000 USDC, which includes a loan, a borrow, of
16 100,000 USDC.

17 Q. Do you see there's a box within the box that's titled
18 "Account Health Check"?

19 A. Correct.

20 Q. What's that?

21 A. So this is the idea that I was talking about just earlier.
22 Every single time you withdraw capital, the system needs to do
23 a risk calculation to ensure that your withdrawal is
24 sufficiently collateralized and covered based on the other
25 assets that are in your account. So it's going to run a health

O4AVEIS1

Jain - Direct

1 check.

2 In this case, there's sufficient assets; the account
3 value is quite high relative to this borrow, and so the account
4 check is healthy, the risk is low.

5 MR. BURNETT: All right. Now, let's go down -- and,
6 Mr. Sears, if you could zoom in on the three lines underneath
7 that image.

8 Q. Could you read the first sentence here?

9 A. "Interest is paid on your borrows continuously from your
10 deposits."

11 Q. What does that mean?

12 A. Okay. So remember step one was you had to deposit assets
13 into your margin account. Those deposited assets are kind of
14 like -- you can think of it in an analogy from at least the
15 financial interest rate world; it's not a bank account, but it
16 receives interest. So you're receiving some amount of interest
17 on your assets. And then whenever you take out a loan, you
18 have to pay interest.

19 So what this is saying is that it's essentially taking
20 the interest that you have to pay automatically from the
21 interest that you're receiving. So the system automatically
22 takes your input interest that you're receiving on your
23 reserves and your deposits and your assets, and using that to
24 pay out the interest that's due on your loan, and it does it
25 continuously.

O4AVEIS1

Jain - Direct

1 Q. And what's the last sentence in bold?

2 A. "To repay your loan, deposit or trade for the borrowed
3 asset."

4 Q. All right. So I want to take a look at one last piece of
5 these user documents.

6 MR. BURNETT: Mr. Sears, if we can go to page 60.

7 Q. Now, do you see there's a section here called
8 "Understanding Collateral on Mango Markets"?

9 A. I do.

10 MR. BURNETT: And let's zoom in on that.

11 Q. And I want to focus on the second paragraph.

12 A. Okay.

13 Q. Could you read the first sentence of that second paragraph?

14 A. "On Mango Markets, collateral health is connected to your
15 health ratio, which is based on your collateral ratio."

16 Q. Now, could you explain the relationship between that
17 collateral ratio concept you talked about earlier and this
18 health ratio on Mango Markets?

19 A. Yeah, sure.

20 I mean, the equation is written here for the
21 collateral ratio, but it's essentially deposits plus positions
22 divided by loan. So essentially it's a type of here are your
23 assets and here are your borrowings and here's the ratio of the
24 two of them. And that factors into your health ratio.

25 Q. Now, do you see down at the bottom of this blowup there's a

O4AVEIS1

Jain - Direct

1 bold subtitle that's labeled "Watch Your Health Ratio"?

2 A. I do.

3 MR. BURNETT: All right. Let's, Mr. Sears, zoom out
4 and we'll go to the paragraph that's under "Watch Your Health
5 Ratio," please. The top of the next page. If we could zoom in
6 on the first paragraph here.

7 Q. Could you read that paragraph for the jury.

8 A. Sure.

9 "Once a position is opened, it must maintain a health
10 ratio above zero percent. If an account falls to zero percent,
11 it will be liquidated and funds will be lost. To increase your
12 health ratio, reduce your borrows or deposit funds into your
13 Mango Markets account to top up the health bar."

14 Q. So what do users on Mango Markets need to do with respect
15 to collateral in order to maintain a borrow open?

16 A. You need to have a health ratio above zero percent.

17 Q. And the zero percent there, can you explain what that means
18 in terms of collateral ratio?

19 A. It basically just means that there's no longer sufficient
20 collateral to cover your loans.

21 MR. BURNETT: All right. So let's take this document
22 down, Mr. Sears.

23 Q. And I want to talk about just one last thing.

24 So you mentioned that Mango Markets allows users to
25 trade perpetuals; correct?

O4AVEIS1

Jain - Direct

1 A. Correct.

2 Q. Did that include trading perpetuals based on that Mango
3 token that you mentioned earlier?

4 A. Indeed it did.

5 MR. BURNETT: All right.

6 Let's take a look at Government Demonstrative 1824.

7 Q. What are we looking at here?

8 A. Sure. So I want to be clear. There's a couple of
9 different levels of Mango going on in this screenshot.

10 So number one, on the upper left-hand side you see the
11 Mango logo in the upper left-hand corner. And below that
12 there's trade functions. So this indicates that this entire
13 screen is a screenshot of the Mango Markets platform. So on
14 the Mango Markets platform, it's an exchange, so there's
15 different sorts of assets that are listed there to trade.

16 And in particular, the asset that we're looking at is
17 the Mango token, not the actual underlying token, but the
18 perpetual. So MNGO-PERP, this second Mango logo, indicates
19 that this is the sort of asset that's being viewed.

20 So to be clear, this is a view of the Mango perpetual
21 as displayed on the Mango Markets overall trading system.

22 Q. Do you see there's a box in the middle of the screen that's
23 labeled MNGO-PERP?

24 A. I do.

25 Q. What's that box for?

O4AVEIS1

Jain - Direct

1 A. So that's the box where a user, a trader could enter into
2 an order.

3 MR. BURNETT: All right. So let's zoom in on that box
4 and go to Government Demonstrative 1825.

5 Q. What does this slide have on it just compared to what we
6 were looking at a minute ago?

7 A. This is just a blowup of that trade entry screen that we
8 saw a minute ago.

9 Q. Do you see that the buy option is highlighted here?

10 A. I do.

11 Q. What does that mean?

12 A. So it appears that the trader who's using this screen at
13 the moment is putting in an order. And the order is to buy a
14 Mango perp. And the pair, the relative value that they are
15 betting on, is to be long, the relative value of Mango, versus
16 USDC.

17 Q. All right. And do you see where it says price, size, and
18 quantity?

19 A. Yes.

20 Q. Before we get to the details of this, how does that compare
21 to some of the earlier slides that you walked through on
22 perpetuals?

23 A. Yeah. So this is analogous to the slides that we walked
24 through yesterday on perpetuals. When you create a perpetual,
25 you agree on a particular relative value pair, you agree on a

O4AVEIS1

Jain - Direct

1 size, and you agree on a price.

2 And again, there's no actual trading of the underlying
3 tokens here; they are just putting in an order to create a
4 Mango perpetual. And that order, you know, may be matched with
5 a short on the other side and, if so, then you would have a
6 contract.

7 Q. So what's the bet that this person is looking to make?

8 A. So this person is a buyer. So she's looking to go long.
9 So she's hoping that the price of the Mango token will
10 appreciate relative to USDC, go up.

11 Q. And what does the size part of this bet reflect?

12 A. So the size is, again, a multiplier. And so she's betting
13 on this particular perpetual being created in 2,000 size, or is
14 willing to bet on 2,000 size of Mango.

15 MR. BURNETT: All right. So let's go ahead to
16 Government Demonstrative 1826.

17 Q. And do you recognize this type of slide?

18 A. Sure.

19 Q. What do you recognize it from?

20 A. Sure. These are the slides that we were using yesterday to
21 walk through perpetuals.

22 Q. Starting on the left-hand side, what's the bet between the
23 two parties in this example?

24 A. Right. So this reflects the order that was populated from
25 the last screen into our perpetual walk-through slide.

O4AVEIS1

Jain - Direct

1 And so the woman at the top is the long, so she might
2 have been the trader that was entering those orders on the last
3 screen. And she's long at an initial price of .04 USDC per
4 Mango or four USD cents, USDC cents. And the size is 2,000
5 Mangos. That would be a multiplier on the contract for
6 purposes of computing the gains and the losses.

7 Q. And what's the short position?

8 A. And so the short is the opposite of that. So it's the same
9 contract that the short agreed to, but the short is betting
10 that the price will go down, that is, the relative value
11 between the Mango token and USDC will go down.

12 Q. Now, in this example, what's the existing perpetual price
13 of USDC against Mango according to that yellow bar in the
14 middle?

15 A. Well, it's .04, so it hasn't changed. Nothing's happened.

16 (Continued on next page)

O4ACeis2

Jain - Direct

1 BY MR. BURNETT:

2 Q. All right. So let's walk through some changes. If you go
3 to government demonstrative 1827. So what's happened with the
4 USDC Mango price on the yellow bar here?

5 A. It went up. And it went up by .02.

6 Q. What does that mean for the long position?

7 A. Well, it's good news for our friend, the long at the top.
8 She gained .02 for every Mango in the contract size. So .02
9 times 2,000 Mango would get us to her unsettled gain at the top
10 of 40 USDC.

11 Q. To understand how the sizing works, if this position had
12 been for say 20,000 Mango instead of 2,000 Mango, what would
13 her unsettled gain/loss be?

14 A. Sure. So again, the size acts as a straight multiplier
15 that increases and magnifies the profits and gains. So, for
16 example, if instead of 2,000 the contract was struck to be
17 20,000, so 10X higher, the arithmetic effect on the gain or
18 loss would just be a 10X-ing. So 400. So you could do this
19 indefinitely, a hundred X, a thousand X and so forth.

20 Q. Let's take a look at government demonstrative 1828. What's
21 happened with the price in this scenario?

22 A. Well, it's gone down by .02. And so, that's good news for
23 our friend, the short; bad news for our friend, the long.

24 Q. And on this Mango slide, just like you had on your previous
25 slide, there are references to unsettled gains and losses;

O4ACeis2

Jain - Direct

1 correct?

2 A. Correct.

3 Q. What does it mean for there to be an unsettled gains and
4 loss on Mango Markets?

5 A. Right. So, um, we addressed this briefly yesterday, but
6 another kind of value driver beyond the value drivers that we
7 talked about is settlement cash flows. So, for example, in
8 this scenario, the short position is up 40 USDC and the long
9 position is down 40 USDC. And so, the market creates a
10 mechanism by which the short position can demand settlement or
11 demand his \$40, or actually 40 USDC, and then the long position
12 will be compelled to settle and pay up 40 USDC to make both
13 parties whole. So timing of each settlement cash flows ends up
14 being another value lever in a perpetual contract structure
15 like this.

16 Q. Do Mango perpetuals on Mango Markets also involve funding
17 rates like you discussed earlier?

18 A. Yes.

19 Q. So we won't go into all the mechanics again, but just
20 broadly speaking, how do the funding rates on Mango Markets
21 compare to the funding rates that you described earlier in your
22 testimony?

23 A. They work similarly to how we discussed the funding rates
24 yesterday, meaning there is an oracle that tries to get
25 third-party sources of pricing and compares that to the pricing

O4ACeis2

Jain - Cross

1 in the order book and creates transfer payments between the
2 longs and the shorts accordingly based on which one is rich or
3 cheap.

4 Q. Finally, to close the loop, you testified about borrowing
5 on Mango Markets a few minutes ago; correct?

6 A. Correct.

7 Q. You testified the amounts one can borrow on Mango Markets
8 depends at least in part on the value of their assets; correct?

9 A. Correct.

10 Q. So what effect would the value of a perpetual, even if
11 unsettled, have on someone's ability to borrow on Mango
12 Markets?

13 A. Well, the perpetual counts as the assets. And so, when you
14 add up together all of the asset of the account, you also add
15 perpetuals into that bucket. So if the perpetuals are of great
16 value, one will be able to borrow against the value of those
17 perpetuals. If the perpetuals were of negative value, it would
18 affect your borrowings accordingly.

19 MR. BURNETT: Thank you. No further questions, your
20 Honor.

21 THE COURT: Thank you very much. Mr. Klein.

22 MR. KLEIN: Yes, your Honor.

23 CROSS-EXAMINATION

24 BY MR. KLEIN:

25 Q. Good morning, Mr. Jain.

O4ACeis2

Jain - Cross

1 A. Good morning.

2 Q. Let me ask you a few questions just to lay a framework
3 here.

4 You walked through a number of demonstratives with the
5 government, that's what we call them as lawyers, which are
6 those slide shows on the blockchain. Did you create those
7 demonstratives?

8 A. I worked with Brattle to create them, yes.

9 Q. Did you pull the screenshots from Binance?

10 A. I directed folks at Brattle to pull those screenshots and
11 reviewed them for the demonstrative.

12 Q. Do you have a Binance account?

13 A. I do not, no.

14 Q. Let me jump into some specific exhibits here. Let's talk
15 about 1808 first. We're going to pull that up for the jury.
16 Do you remember talking about stable coins with the prosecutor?

17 A. I do.

18 Q. And USDC is a Stablecoin; correct?

19 A. Yes.

20 Q. And USDT is also a Stablecoin?

21 A. Yes.

22 Q. And those are called Fiat-backed Stablecoins; correct?

23 A. Sure.

24 Q. Let's move onto GX 1812. Oh, sorry. GX 1816.

25 THE COURT: Counsel, you're referring to them as

O4ACeis2

Jain - Cross

1 exhibits, but these are demonstratives.

2 MR. KLEIN: Yes, I'm sorry. I got that in my mind.

3 Thank you, your Honor. Government demonstrative 1812.

4 Actually, I wanted 1816. Sorry, Mr. Smith. My handwriting
5 wasn't that good.

6 Q. So you've spent a lot of time preparing for this case;
7 correct?

8 A. I did spend preparing for this case, yes.

9 Q. And you understand crypto exchanges, you've studied those?

10 A. I have.

11 Q. And what's a centralized crypto exchange?

12 A. Well, a centralized crypto exchange is a crypto exchange
13 run by a central party, a central company. Some examples we
14 talked about, you know, Fidelity, Robinhood, Coinbase Finance.

15 Q. And then Mango Markets was what's known as a decentralized
16 exchange?

17 A. That's correct.

18 Q. So it wasn't controlled by any company or any one person?

19 A. It was a decentralized exchange in that it was operated by
20 a smart contract on blockchain.

21 Q. So smart contracts ran it?

22 A. It was implemented as a smart contract on a blockchain.
23 There was a community of decentralized users and folks that
24 were involved with the project.

25 Q. And you studied crypto spot markets, cryptocurrency spot

O4ACeis2

Jain - Cross

1 markets?

2 A. I have.

3 Q. You know what trading bots are?

4 A. I do.

5 Q. What is a trading bot?

6 A. A trading bot is a kind of automated trader. So a trading
7 bot -- so, in a traditional trade, one user enters into a trade
8 that they wish to engage in. So they might go along with
9 Bitcoin. A trade bot would be an example of a user programming
10 a model to trade automatically according to the parameters on
11 the model.

12 Q. And trading bots operate on lots of crypto exchanges;
13 right?

14 A. Trading bots operate on crypto exchanges, yes.

15 Q. You know what liquidity is?

16 A. Sure.

17 Q. What's liquidity?

18 A. Well, we looked a little bit about liquidity when we saw
19 the order book. The order book has bids it offers. And so, as
20 a first approximation, if there's lots of bids and there's lots
21 of offers, then there's lots of trades as a result. That would
22 be some of the characteristics of a more liquid market. A less
23 liquid market might be, for example, if that order book did not
24 have a lot of bids or offers, or if the bids and offers were
25 very, very far apart and it would be characterized by perhaps

O4ACeis2

Jain - Cross

1 less trading volume.

2 Q. Do you know what hidden liquidity is?

3 A. Yes.

4 Q. What's hidden liquidity?

5 A. So this is getting a little bit technical, but the order
6 books that we saw on our examples were all examples of
7 displayed liquidity, meaning those order books were displayed
8 to everyone in the market. So everyone had a fair shot at
9 seeing where the orders were, where the bids were, where the
10 offers were. Sometimes, in financial markets, both traditional
11 and crypto, there's non-displayed or hidden liquidity,
12 meaningly liquidity that might be provided by particular kinds
13 of market participants and, for whatever reasons, they're able
14 to engineer their strategies in a manner such that their
15 liquidity is hidden from water books.

16 Q. So if you're engaged on spot market, there could be trading
17 bots on the spot market, correct, the cryptocurrency spot
18 market as well as hidden liquidity?

19 A. It's possible.

20 Q. And those both could cause substantial losses to someone on
21 the other side of them; correct?

22 A. It's certainly possible. I mean, that's kind of a general
23 statement, but I'm happy to walk through the example --

24 Q. I think that's enough for the moment.

25 A. Okay.

O4ACeis2

Jain - Cross

1 Q. All right. Let's talk about 1816 for a second now. On
2 these slides, there's a reference to USDC, and that's how
3 things are priced. Crypto exchanges, whether decentralized or
4 centralized, often use USD as the pricing, don't they, even
5 though they don't actually have Fiat dollars on the exchange;
6 right?

7 A. I'm sorry. Could you rephrase the question.

8 Q. This talks about USDC as the value?

9 A. Correct.

10 Q. A lot of crypto exchanges post value in U.S. dollars and
11 put USD; correct?

12 A. You're talking about the base currency that crypto
13 exchanges use. So, some crypto exchanges use USDC, some crypto
14 exchanges U.S. dollars, other crypto exchanges allow the user
15 to pick their base currency. So the base currency or like the
16 home currency or what it's denominated in, it could be U.S.
17 dollars, it could be USDC.

18 Q. But the U.S. dollars really aren't traded on that
19 cryptocurrency exchange, are they, because U.S. dollar is not a
20 cryptocurrency; correct?

21 A. I think a percent of a U.S. dollar on a cryptocurrency,
22 yes.

23 Q. There's also a lot of different exchanges, both
24 decentralized and centralized; right?

25 A. Yes, there's multiple exchanges.

O4ACeis2

Jain - Cross

1 Q. And you could have -- let's use an example of Bitcoin.

2 There's going to be variations in the price of Bitcoin across
3 multiple exchanges; right?

4 A. Correct.

5 Q. Sometimes they can even be substantial?

6 A. Sure. Sometimes they can be substantial enough that
7 they're tradeable, sure.

8 Q. And, in fact, there's a whole industry of people who work
9 on arbitraging the price differences between those, let's say
10 Bitcoin, looking at different exchanges?

11 A. And either are.

12 Q. And that's because there's enough of a spread in them that
13 they think they can profit by trading between the exchanges;
14 right?

15 A. Yeah. I would say that, um -- um, if the pricing of a
16 given asset at the same time differs across different
17 exchanges, there may or may not be an opportunity for a very,
18 very clever, very, very fast market trader to try and arbitrage
19 or trade the differences of those to try and make a quick
20 profit -- if one is cheaper, buy it there -- and then quickly
21 sell it when it's more expensive. There's transaction costs,
22 credit, counterpart, a whole host of operational issues that go
23 along with executing that trade. Oftentimes, what people think
24 is a free lunch is not actually a free lunch. But it's fair to
25 say this that there are certainly market participants that aim

O4ACeis2

Jain - Cross

1 to do this.

2 Q. That could be bots, too, programs, automated programs that
3 look for these price discrepancies?

4 A. Sure. It's possible that there are bots that also do this.

5 Q. I'm going to turn to government demonstrative 1819, please.
6 This is where you talked about an oracle. This is a general
7 oracle, right, this isn't the Mango oracle?

8 A. Indeed. That's meant to be a general representation
9 oracle.

10 Q. And in this oracle, it looks like -- well, you know what
11 the difference between a mean and a median is; right?

12 A. Sure.

13 Q. What's the difference?

14 A. Well, the median is the middle value in the series and the
15 median is the average -- the mean is the average.

16 Q. In this case, the 71,000 is both the mean -- actually --

17 A. It's both the mean and the median.

18 Q. I was making sure my math was right. It's both the mean
19 and the median.

20 What did Mango's oracle use?

21 A. Mango's oracle used, um -- there was an algorithm that
22 Mango's oracle used.

23 Q. What did it use, mean or median?

24 A. It wasn't a simple arithmetic, it was a multi --
25 multifactorial model.

O4ACeis2

Jain - Cross

1 Q. You sure about that?

2 A. I am.

3 Q. Let's turn to 1821, please. And again, this slide isn't
4 referring specifically to Mango, it's just a general discussion
5 of oracles and order books; right?

6 A. Correct.

7 Q. And up at the top, you have the order book mid price. Do
8 you see that?

9 A. I do.

10 Q. And on an exchange, that's often referred to as the market
11 price; right?

12 A. I would say mid price is more accurate. I mean --

13 Q. I'm not asking what's more accurate, I'm asking what the
14 exchange will often call it. So Mango or another exchange, do
15 people often refer to it as the market price?

16 A. Well, I would say all of these prices could be referred to
17 as market prices. So in the sense that all these prices could
18 be referred to as market prices, sure, any one particular price
19 you could call a market price.

20 Q. Okay. And then the oracle down below, that 71,000, that's
21 a settlement price?

22 A. Again, I would say it's an oracle price. And one of the
23 uses of the oracle price could be settlement of contracts.

24 Q. Okay. But I could call that the settlement price and you
25 would know what I was talking about; right?

O4ACeis2

Jain - Cross

1 A. If that particular contract that we were discussing
2 referenced that particular oracle, then sure, it would be
3 shorthand.

4 Q. Now I'm going to turn to demonstrative 1826. Now we are
5 talking about the Mango perpetual, right, on this
6 demonstrative?

7 A. Correct.

8 Q. So with the Mango perpetual, you could settle at any time;
9 right?

10 A. Correct.

11 Q. The oracle price was in USD, not USDC; right?

12 A. I would have to doublecheck on that.

13 Q. You're not sure? All right.

14 Did you ever trade on Mango Markets?

15 A. I did not, no.

16 Q. Did you read the Mango Markets light paper?

17 A. I did not, no.

18 Q. Do you know what a white paper is?

19 A. I know what a white paper and a light paper are.

20 Q. What are they?

21 A. A white paper is a kind of technical document that products
22 often use to describe, um, their project in technical detail,
23 and the light paper is meant to be a more summary version of
24 that. Now, that's historically what they've been used as;
25 however, one could argue that, over time, they've essentially

O4ACeis2

Jain - Cross

1 evolved into sort of marketing documents.

2 Q. You mentioned that there was a Mango token, right, that's
3 what these trades were in?

4 A. Correct, the MNGO token.

5 Q. When was that issued?

6 A. I don't recall the exact issue date.

7 Q. Do you know how many were issued?

8 A. Not off the top of my head, but it's in the documents.

9 Q. Which documents that you reviewed?

10 A. Well, I reviewed, for example, just a general internet
11 search, marketcap.com, for example, and other market data
12 sources that have that information. But I don't recall the
13 number off the top of my head.

14 Q. Do you know what an ICO is?

15 A. I do.

16 Q. What is an ICO?

17 A. Well, an ICO stands for initial coin offering. It's a
18 mechanism, um, by which projects sometimes sell coins to the
19 public, um, and obviously there's a -- all kinds of dynamics
20 around ICO.

21 Q. Do you recall that Mango sold 500 million tokens in August
22 2021?

23 A. I don't recall the exact number, but --

24 Q. Do you recall if that was discussed in that exhibit the
25 government showed you?

O4ACeis2

Jain - Cross

1 A. Which exhibit?

2 Q. 1011.

3 A. Maybe I can refresh my memory.

4 MR. KLEIN: I'm going to ask to pull up Government
5 Exhibit 1011 at page 169. This is in evidence, so you can show
6 it to the jury, Government Exhibit 1011.

7 Q. Do you see in the bottom portion of that, I would say about
8 three quarters of the way down, "token distribution"?

9 A. Yes.

10 Q. Does that refresh your memory about the token distribution?

11 A. Well, I knew that the DAO, that is the organization that
12 votes on how to use tokens, have the ability to vote to
13 allocate those tokens to different projects, and I think that's
14 what they're saying here.

15 Q. Do you know how the tokens were distributed?

16 A. Well, the Mango governance token has the ability to let
17 users have a say in that.

18 Q. Are you aware of the -- have you heard of the Mango Upgrade
19 Council?

20 A. I have not.

21 Q. Do you know who controls upgrades to Mango Markets?

22 A. Well, I know there's a group of developers that are
23 responsible for the creation maintenance of Mango.

24 Q. Do you know how Mango used its revenue that it received
25 from the token sale?

O4ACeis2

Jain - Cross

1 A. Well, I know a portion of it went to the treasury and a
2 portion of it went to other expenses and leases.

3 Q. I'm going to direct your attention to demonstrative 1825.

4 MR. KLEIN: Actually, hold on one second.

5 (Pause)

6 Sorry. I'm going to stick with this one. 1011, page
7 81, please. If you could, Mr. Smith, please blow up the top
8 portion.

9 Q. Do you remember discussing this with the prosecutor?

10 A. I do.

11 Q. And this is a window in that paper you went through that
12 shows a withdrawal; right?

13 A. That's right.

14 Q. In this case, it says, the borrow amount matches the
15 withdrawal amount; right?

16 A. That's right.

17 Q. But you could withdraw your own funds also; right?

18 A. Sure. So, like, if this account had USDC in it, one would
19 not need to borrow and you could withdraw those USDC directly.

20 Q. And when we talked about the borrows and the -- you called
21 them loans, you did an analogy to a mortgage; right?

22 A. Correct.

23 Q. In the case of Mango, all this is controlled by a smart
24 contract; right? Smart contracts control these operations?

25 A. The risk engine for calculating your collateral ratio and

O4ACeis2

Jain - Cross

1 your health is done programmatically, yes.

2 Q. When you deposit funds into Mango, you're depositing those
3 into a smart contract?

4 A. That's correct.

5 Q. When you're withdrawing them, you're withdrawing them from
6 a smart contract?

7 A. That's correct.

8 Q. Now, a bank is a centralized authority, right, there's
9 Citibank, there's Bank of America; right?

10 A. Sure.

11 Q. So when you're borrowing money from a bank, you're going to
12 an institution controlled by a company. In this case, you're
13 going to a smart contract with Mango; right?

14 A. Correct. Strictly speaking, the deposit and withdraw
15 transactions are executed as computer code against a smart
16 contract.

17 Q. And that's how the whole operation works, is through the
18 smart contract, right, you don't have to go talk to a teller at
19 a bank or meet with a bank manager, your communications are
20 with the smart contract?

21 A. I would say that deposit transactions and withdrawal and
22 borrow transactions are done programmatically with a smart
23 contract. You don't have to talk with a teller, no.

24 Q. So do you into Mango Markets?

25 A. No, that data is not a field in the deposit.

O4ACeis2

Jain - Cross

1 Q. You don't have to tell it where your funds came from that
2 you're depositing, do you?

3 A. I don't believe so, no.

4 Q. Do you know or you don't think so?

5 A. No.

6 Q. You don't have to say why you want to borrow funds, do you?

7 A. No.

8 Q. You don't have to say if you're ever going to return them,
9 do you?

10 A. Well --

11 Q. You don't have to tell the smart contract, I plan to return
12 these funds on X date, do you?

13 A. While there is no field in which you have to sign a
14 promissory note, for example, or sign to that effect, um --

15 Q. You don't have to tell a smart contract --

16 MR. BURNETT: Objection. He's answering the question.

17 THE COURT: It's overruled.

18 A. Could you repeat the question.

19 Q. You don't have to tell the smart contract when or if ever
20 you're going to return the funds, do you, on Mango Markets?

21 A. There is no ability to tell the smart contract when you're
22 going to return the funds.

23 Q. It doesn't ask you that, does it, the smart contract?

24 A. Correct. It's true that the smart contract doesn't ask you
25 when you're going to return the funds.

O4ACeis2

Jain - Cross

1 Q. There's no fixed repayment schedule with a smart contract,
2 is there?

3 A. These borrows don't have a fixed repayment structure, it's
4 true.

5 Q. Technically, you could have the money out forever as long
6 as your health indicator was up?

7 A. I mean, theoretically, it's possible.

8 Q. That's very different than a mortgage, isn't it?

9 A. So, I was using the mortgage as an analogy --

10 Q. It's very different than a mortgage, isn't it?

11 A. To the extent that there's an analogy with respect to
12 collateral and how collateral works, I think that's an accurate
13 analogy. To the extent that a mortgage has more explicit
14 documentation about some of the topics that you are talking
15 about, clearly, the smart contract doesn't have the same level
16 of documentation as a mortgage.

17 Q. You also talked about margin loans; right?

18 A. Correct.

19 Q. Those are callable at any time, aren't they, usually?

20 A. Correct.

21 Q. Mango Markets isn't callable at any time, is it?

22 A. I would have to think about that to give a complete answer.
23 The answer's maybe, maybe not. I would have to think about
24 that to give a complete answer on that particular type of a
25 point.

O4ACeis2

Jain - Cross

1 Q. It doesn't, does it?

2 A. I mean, there is a mechanism by which the account can be
3 liquidated, but I would have to think about if there is some
4 used case or edge case where it could in certain
5 circumstances --

6 Q. You're not aware as you sit here today testifying, are you?

7 A. I haven't thought about it, that particular type of a
8 point.

9 Q. I'm not asking whether you thought about it. Sitting here
10 today, you're not aware of any, are you?

11 A. Off the top of my head, no.

12 MR. KLEIN: One second, your Honor.

13 (Pause)

14 Q. Now, when you started your testimony with the prosecutor,
15 you mentioned you testified in other cases; correct?

16 A. Correct.

17 Q. And you mentioned you testified for both the government and
18 private parties?

19 A. Correct.

20 Q. But in cases involving the government against an
21 individual, you've only testified for the government; correct?
22 You testified for the CFTC, you testified for the SEC, you've
23 never testified on behalf of someone like Mr. Eisenberg when
24 the government's litigating against him, have you?

25 A. Um, I'm thinking of one of my cases and it's a -- a maybe.

O4ACeis2

Jain - Cross

1 Um --

2 Q. Have you been in court in that case?

3 A. No.

4 Q. Now, testifying for the government is part of your expert
5 consulting business; right?

6 A. I have consulted for the government, sure.

7 Q. And you are being paid by the prosecutor's office?

8 A. I am being paid by Brattle.

9 Q. You're getting paid ultimately. Who's paying Brattle?

10 A. Yeah, I believe Brattle sends the bills to -- I don't know
11 exactly what part of the government they bill, but --

12 Q. Well, do you think the government's not paying you for
13 testifying?

14 A. I think the government -- some part of the government is
15 paying Brattle and Brattle pays me.

16 Q. And what do they pay you?

17 A. For this particular --

18 Q. Brattle. What are you getting paid per hour?

19 A. \$995 per hour.

20 Q. How many hours have you spent on this so far?

21 A. I don't know the exact number of hours. I can give you an
22 estimate if you'd like.

23 Q. Yeah, an estimate.

24 A. Maybe around 50 hours.

25 Q. So that's approximately \$50,000?

O4ACeis2

Jain - Cross

1 A. Sure.

2 Q. And that's quite a bit of money, isn't it?

3 A. I'm not sure how to answer that.

4 Q. Is \$50,000 a lot of money to you or not?

5 A. Sure, it's a decent amount of money.

6 Q. Now, I want to talk to you for a moment about some
7 financial difficulties you've had.

8 You lived in North Carolina at one point?

9 A. I did.

10 Q. And do you recall you owe the state of North Carolina
11 \$95,000 in backed taxes, don't you?

12 A. I do not know that to be true or not.

13 Q. Would it refresh your memory if I showed you a report from
14 the Department of Revenue from North Carolina?

15 A. I don't -- I don't know that to be true. So it has nothing
16 to do with my testimony. It's irrelevant.

17 Q. The fact that you owe money and you're making money here is
18 irrelevant? \$50,000 is a lot of money to you, isn't it, if you
19 owe \$95,000 to the State of North Carolina, don't you?

20 A. Again, this is the first time I'm hearing that.

21 Q. Would it refresh your memory if I showed you a certified
22 record from the Department of Revenue --

23 A. I have no memory to be refreshed. But I'm happy to talk
24 about -- I'm happy to talk about the topics of the case, but --

25 Q. Do you recall you owe Wells Fargo approximately \$20,000?

O4ACeis2

Jain - Cross

1 A. I don't recall that either.

2 Q. Would it refresh your memory if I showed you a record from
3 Wells Fargo?

4 A. Well, I don't have a memory of that to be refreshed, but
5 I'm happy to take these documents offline.

6 Q. We're here in court to talk about it.

7 Did you set up a company called nCent, didn't you?

8 A. I did.

9 Q. And nCent is no longer in existence?

10 A. Correct.

11 Q. Do you recall that nCent has an outstanding tax liability
12 of approximately \$450,000?

13 A. I was not aware of that, no.

14 Q. You weren't aware of that? You ran the company?

15 A. Correct. There was lawyers that were responsible for the
16 dissolution of the company and I didn't follow up with them.

17 Q. Your CV mentions you currently work for a company AutoVar?

18 A. AutoVar, correct.

19 Q. So you're currently there?

20 A. Correct.

21 Q. So you must be aware you have an outstanding tax bill for
22 \$350,000 for AutoVar?

23 A. I wasn't aware of that.

24 Q. You run that company?

25 A. Correct.

O4ACeis2

Jain - Cross

1 Q. No one's ever mentioned to you that you owe \$350,000 in
2 taxes?

3 A. No.

4 MR. KLEIN: Your Honor, I'd like to offer those
5 certified records in.

6 MR. BURNETT: Objection.

7 THE COURT: Let's have a sidebar.

8 (Continued on next page)

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O4ACeis2

Jain - Cross

1 (At the sidebar)

2 THE COURT: On what basis?

3 MR. KLEIN: It goes to bias. He was testifying for
4 the government, he's making a lot of money, he has huge
5 outstanding tax liabilities and debts in North Carolina, in
6 Delaware and other places. I think we can argue to the jury
7 this is a guy who regularly testifies for the government, he's
8 getting a bunch of money, and this could influence his
9 testimony, and he has all these outstanding debts.

10 THE COURT: But literally, walk me through the rules
11 of evidence.

12 MR. KLEIN: They're certified records. I think we're
13 allowed to put evidence in the record that goes to bias.

14 MR. BURNETT: So a few things. So first of all, on
15 the foundational point the testimony of the witness as I
16 understood is it was he was not aware of these issues that
17 Mr. Klein is asserting. So it can't go to bias if he doesn't
18 know about it.

19 Second, you can't impeach with extrinsic evidence
20 typically. They asked the question, they got their answer.
21 There's no basis to impeach with the extrinsic evidence, as
22 well.

23 THE COURT: I don't think he's trying to impeach. I
24 think he's saying these certified records come in, they're
25 independently admissible, they're relevant because they go to

O4ACeis2

Jain - Cross

1 the witness's bias.

2 MR. BURNETT: But that's what I mean by he's trying to
3 impeach. It doesn't go to any substance of the case. Its only
4 purpose is to go to bias, which is serving an impeachment
5 purpose. We also haven't seen these records before, so we have
6 no way to know whether they're actually certified records or
7 they're real or not. They haven't shown us in advance.

8 THE COURT: That's fair because if they don't go to
9 impeachment, then you would have had to disclose them.

10 MR. KLEIN: They do go to impeachment, your Honor. I
11 was trying to impeach him, obviously.

12 MR. BURNETT: They can't both go to impeachment and
13 not go to impeachment.

14 MR. KLEIN: They do go to impeachment, and you can --
15 bias is not extrinsic. You are permitted under the rules to
16 put in evidence of bias.

17 So he's just straight up lying, your Honor. And I
18 think it's fair for the jury to know that he has a huge
19 financial incentive, and he's sitting there and just lying.

20 MR. BURNETT: That's not true, your Honor. He
21 answered about what his awareness was. He was asked a
22 question --

23 THE COURT: I think you may need to ask a few more
24 questions. There might be a basis to put those in on
25 impeachment grounds because I think the government is correct

O4ACeis2

Jain - Cross

1 that the only questions you asked is whether he was aware of
2 the fact or not, and he said he did not have a memory of that
3 fact. But you can ask him what is reflected in the documents,
4 and if he denies that fact, then you can put it in and impeach
5 him.

6 MR. KLEIN: So I can show him the document?

7 THE COURT: You can.

8 MR. BURNETT: To be clear, the question needs to be:
9 "Does that refresh your recollection?" Not: "Is this in the
10 document?"

11 MR. KLEIN: No, that's not --

12 MR. TALKIN: No.

13 MR. KLEIN: No, your Honor. This goes right to bias.
14 I can show him this record. This can go into evidence and I
15 can ask him about it.

16 THE COURT: Well, first you're going to show the
17 witness the document. You can ask if it refreshes his
18 recollection. If he says no, you can ask followup questions
19 and put it in on impeachment grounds if appropriate. That's
20 the way you --

21 MR. BURNETT: I still think it would be impeaching by
22 extrinsic evidence.

23 MR. TALKIN: Bias is never extrinsic. The rules of
24 evidence are not required as to be stuck with his answer. That
25 means anyone who ever comes in this courtroom with anything

O4ACeis2

Jain - Cross

1 bad, they can just say, I don't remember. The rules of
2 evidence are set to make sure that that doesn't happen so a
3 defendant can get a fair trial or any party in a case can get a
4 fair trial. Your Honor laid out exactly the framework of how
5 it's supposed to go down.

6 THE COURT: That's how it's going to work. You can
7 rephrase your objection, but let's ask a few more questions.

8 (Continued on next page)

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O4ACeis2

Jain - Cross

1 (In open court)

2 THE COURT: I believe one of the jurors may have had a
3 question. If it's about a potential break, could you give us a
4 hands up. Okay, I think the jury would like a quick break,
5 which we will take. So let's take a quick break and we'll be
6 back in 10 minutes.

7 MS. MARTABANO: Your Honor, I need to step out at
8 11:45. I thought that would be on a break, but I just didn't
9 want to disturb the Court at the time when it happens.

10 THE COURT: That's fine. You'll be excused.

11 MS. MARTABANO: Thank you, your Honor.

12 THE COURT: Okay. See you in 10.

13 (Recess)

14 Mr. Hernandez, are we ready to go?

15 MR. BURNETT: Your Honor, we're just seeing these tax
16 documents for the first time. I actually think that these
17 certifications just don't support a number of the documents
18 that they're saying are certified records. So what I'd propose
19 that we do is if they want to ask their foundational questions
20 that they were going to ask, they can do that, then we can
21 discuss at a later time on another break what should actually
22 come in as a certified record or not because things are stapled
23 together that are not actually part of the same materials.

24 THE COURT: That's an issue. Mr. Klein, do we have to
25 go through that exercise, because the documents are not being

O4ACeis2

Jain - Cross

1 put in to attack the witness's character for truthfulness,
2 they're apparently being put in to show the witness's bias; is
3 that right, Mr. Klein?

4 MR. KLEIN: Yes, your Honor. They would go to his
5 character for untruthfulness because now he's denied it. I
6 can't say that that's not --

7 THE COURT: I don't think you'd be able to put them
8 in.

9 MR. KLEIN: It's to bias, that's why I started those
10 questions. He has now denied it, but yes, it goes to bias.

11 THE COURT: If he testifies that he has no knowledge
12 of those debts, then how would it go to his bias? Because if
13 it's not coming in on bias -- I mean, he would have to know of
14 the debts for it to be relevant to bias; right? His testimony,
15 as it stands is that he had no idea about these tax debts. So
16 if you show him the documents and he says it didn't refresh his
17 recollection, he's not aware of those tax debts, how would it
18 go to the witness's bias?

19 MR. KLEIN: One second, your Honor.

20 (Pause)

21 Thank you for that moment, your Honor.

22 I think a couple things.

23 One, he may recall them when I show them to him.
24 That's a scenario where we don't have to -- but two, if he
25 doesn't, the jury should be permitted to know that there is

O4ACeis2

Jain - Cross

1 countervailing evidence that would go to bias, and these are
2 certified records.

3 THE COURT: But in that case, wouldn't it go to
4 character for truthfulness, in which case it would be subject
5 to Rule 608? That's the line. I'm just trying to figure out
6 how to analyze this. If it goes to the witness's bias, then I
7 think that it would be admissible and I would overrule the
8 government's objection. However, it would need to go to the
9 witness's bias. If you are putting it in as independently just
10 other conduct, the failure to pay taxes that bear on the
11 witness's character for truthfulness, that he's someone who
12 would lie about all this stuff, then it would seem that it
13 would be subject to Rule 609. I may be missing something, so
14 tell me if I'm missing something.

15 MR. KLEIN: That's not why I was intending to offer
16 it, your Honor. I thought it he would acknowledge it, frankly,
17 because there's a bunch of them that are substantial.

18 We are offering them and I think you remember the
19 lead-up questions were about how he's making money here and how
20 he works for the government regularly. And then the point was,
21 well, you're biased for the government because you need regular
22 government jobs because you owe a bunch of money.

23 THE COURT: Here's what I might suggest: You can put
24 the documents in front of the witness and go through that
25 questioning and without -- I don't know that you need the

O4ACeis2

Jain - Cross

1 documents to be in evidence. It may be, for your purposes,
2 sufficient to have gone through that questioning with the
3 witness in addition to the questioning that you've already
4 done. Based on what the witness says, you can offer the
5 evidence in. But again, if he says he's not aware of anything
6 that was going on here, then I don't know that you'd be able to
7 put in those documents. But independent of that, the
8 government is saying these documents are just not admissible
9 because they're not certified records and they're pure hearsay.

10 MR. KLEIN: That's not correct, your Honor. There's
11 different pages that we brought, there are certifications. I'm
12 happy to walk the Court through at break or when we want to and
13 we can show each exhibit --

14 THE COURT: Why don't you go through the questioning
15 right now. You don't need to offer the documents into evidence
16 and you can figure out -- we can figure things out at a later
17 juncture.

18 Is there any need to offer them and have them admitted
19 at this particular time?

20 MR. KLEIN: No, your Honor, I don't need to offer them
21 right now. I could go through the questions, which I
22 understand. I want to make sure I've got it right. I could
23 ask him to look and see if it refreshes his memory. Can I
24 point things out on the document, like it's his address on it?

25 THE COURT: You can ask if the document refreshes his

O4ACeis2

Jain - Cross

1 recollection as to his address. You can ask him if he denies
2 having those debts and then we can take it from there.

3 MR. KLEIN: I'll just ask to refresh and then I'll ask
4 if he denies having those debts.

5 THE COURT: Mr. Burnett.

6 MR. BURNETT: Thank you, your Honor. We still have
7 our 403 and our admissibility objection as to these, which I
8 won't go into now, but I do think it's important that -- I
9 don't think any of this should come in, but even if it does, it
10 has to be the certified document that comes in.

11 THE COURT: I agree with that. As I understand it,
12 Mr. Klein is not going to offer these exhibits into evidence at
13 this time.

14 MR. BURNETT: Okay.

15 THE COURT: If and when he does, I will expect you to
16 rephrase your objection.

17 MR. BURNETT: Thank you.

18 THE COURT: Mr. Hernandez, are we ready with the jury?

19 (Continued on next page)
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O4AVEIS3

Jain - Cross

1 (Jury present)

2 THE COURT: Mr. Klein, you may continue.

3 BY MR. KLEIN:

4 Q. Mr. Jain, you lived in North Carolina; correct?

5 A. More than ten years ago, yes.

6 MR. KLEIN: Your Honor, may I approach?

7 THE COURT: You may.

8 Q. I'm going to show you what's marked as defense exhibit --
9 defense exhibit --

10 THE COURT: Why don't you just show him the document
11 and then you can --

12 MR. KLEIN: Yeah.

13 THE COURT: Okay.

14 MR. KLEIN: I just wasn't sure if I should hand it to
15 your clerk or just give it to him.

16 THE COURT: You can hand it to Mr. Hernandez.

17 Q. I'm showing you what's marked as DX-100A and DX-100B.

18 Mr. Jain, take a moment to review that.

19 A. Okay.

20 Q. Did you live in Palo Alto?

21 A. I did.

22 Q. 2291?

23 A. Yes, for a period of time, yes.

24 Q. Does this refresh your memory that you have an outstanding
25 tax judgment in North Carolina of approximately \$95,000?

O4AVEIS3

Jain - Cross

1 A. These documents appear to be documents that state that,
2 yes.

3 Q. Do you deny you have a tax debt of approximately \$95,000 in
4 North Carolina?

5 A. I'm sorry?

6 Q. Do you deny that you have a tax debt of approximately
7 \$95,000?

8 A. I do not deny it. I'm just seeing these documents now.

9 Q. So you don't deny that.

10 A. To the extent that these documents can be relied upon.

11 Q. Do they help remind you that you owe the state of North
12 Carolina \$95,000?

13 A. Well, these are the first time I'm seeing these, and so I
14 will most certainly take them to my accountant and straighten
15 it out if there's an issue.

16 THE COURT: To be clear, counsel is asking solely
17 whether looking at the documents refreshes your recollection.
18 It either does refresh your recollection or it does not refresh
19 your recollection.

20 THE WITNESS: It does not because I'm seeing them for
21 the first time.

22 Q. Do you deny having a tax debt of \$95,000 in North Carolina?

23 A. I do not deny nor not deny.

24 Q. You had a bank account at Wells Fargo at one point?

25 A. I believe I did.

O4AVEIS3

Jain - Cross

1 MR. KLEIN: Your Honor, may I approach?

2 THE COURT: You may approach.

3 Q. I'm going to show you what's marked as DX-101. Does this
4 refresh your memory that you have -- that you owe Wells Fargo
5 approximately \$20,000, there's a default judgment entered
6 against you?

7 A. Again, this is the first time I'm seeing this document. I
8 don't have a memory to recollect, but I will certainly examine
9 these documents and figure out what they mean.

10 Q. Do you deny that you owe Wells Fargo approximately \$20,000?

11 A. I don't deny nor not deny.

12 MR. KLEIN: Your Honor, may I approach?

13 THE COURT: You may.

14 Q. I'm going to hand you what's marked as DX-102. You
15 previously testified that nCent Lab is your company, right?

16 A. I was the founder of nCent Labs, yes.

17 Q. Does this refresh your memory that nCent is tax delinquent
18 approximately \$450,000 --

19 A. Well, again --

20 Q. -- the state of Delaware?

21 A. -- this is the first time I'm hearing it. It doesn't
22 refresh my memory, but I will certainly look into this with the
23 appropriate financial team.

24 Q. Do you deny that nCent owes Delaware --

25 A. Again, I neither deny nor not deny.

O4AVEIS3

Jain - Redirect

1 MR. KLEIN: Your Honor, may I approach?

2 THE COURT: You may.

3 Q. Your current company is AutoVar?

4 A. Yes.

5 Q. Does this refresh your memory that AutoVar owes the state
6 of Delaware approximately \$350,000 in taxes?

7 A. Again, it doesn't. I don't have a memory of that. But I
8 will most certainly look into this with our financial team.

9 Q. Do you deny that AutoVar owes the state of Delaware
10 approximately \$350,000?

11 A. I neither deny nor not deny.

12 MR. KLEIN: Nothing further, your Honor.

13 THE COURT: Mr. Burnett, redirect.

14 MR. BURNETT: Just a few quick things.

15 REDIRECT EXAMINATION

16 BY MR. BURNETT:

17 Q. Now, Mr. Jain, these financial things that the defense
18 attorney alleged exist, did you have any knowledge of them
19 before you were testifying here today?

20 A. I did not.

21 Q. You testified earlier about how the blockchain works and
22 basic ideas in cryptocurrency, do you remember that?

23 A. That's correct.

24 Q. Did those issues affect in any way your testimony on that?
25 Did those issues that the defense alleges exist affect your

O4AVEIS3

Jain - Redirect

1 testimony?

2 A. Oh, no, they have nothing to do with my testimony.

3 Q. Did those have anything to do with your testimony about
4 perpetuals?

5 A. No.

6 Q. How about your testimony about Mango Markets?

7 A. No.

8 Q. Now, you remember you were asked a number of questions
9 about how sometimes you need to go into a bank and talk to a
10 teller to get a loan; correct?

11 A. Yes.

12 Q. And that was distinguished from a smart contract you can
13 interact with on the computer, right?

14 A. Yes.

15 MR. KLEIN: Objection. Leading.

16 THE COURT: It's overruled.

17 Q. Can you get loans from places on a computer?

18 A. Yes.

19 Q. Can you get marginal loans from places on computers?

20 A. Yes.

21 Q. Do you have to interact with tellers at financial
22 institutions every time you try to get a loan?

23 A. No.

24 Q. Are those computer programs for banks that you get loans
25 from also software programs?

O4AVEIS3

Jain - Redirect

1 A. Yes.

2 Q. Now, one last thing.

3 At one point do you recall you were being asked about
4 borrowing and kind of what you have to put into the smart
5 contract to borrow?

6 A. Sure, yes.

7 Q. And you were starting to give an answer where you said,
8 well, you don't have to sign anything, but, and then there was
9 another question. Can you just explain -- finish your answer
10 what you were going to say?

11 A. Sure. Again, when you -- when one interacts with a smart
12 contract to, for example, deposit assets or withdraw assets,
13 there's no necessarily -- it's not necessarily reduced to a
14 dotted line where you sign.

15 MR. KLEIN: Object, your Honor.

16 THE COURT: That's overruled.

17 A. So the way the transactions work is every single time you
18 click a button, it's not like there's a window that pops up
19 that has every single legal signature about what's happening
20 with the transaction. Overall, there's expectations of how the
21 transaction will occur.

22 MR. KLEIN: Objection, your Honor.

23 A. Based on --

24 THE COURT: Hold on. Hold on.

25 Sidebar.

O4AVEIS3

Jain - Redirect

1 (At sidebar)

2 THE COURT: What's the objection?

3 MR. KLEIN: He's going into testimony about
4 expectations. He's not talking about the actual protocol and
5 how it worked. Now he's going into subjective things that are
6 beyond the scope.

7 THE COURT: I would agree. I think the intent of the
8 question was simply to furnish the witness the chance to
9 clarify his answer. But he seems to be using that as the
10 opportunity to get into a number of issues that he has no
11 expertise in.

12 MR. BURNETT: Your Honor, I think the defense opened
13 the door when they were asking about your signing on the dotted
14 line to do something. They clearly asked a question that was
15 designed to invoke a contract. And they cut him off in the
16 middle of his answer that he was trying to give. He should be
17 allowed to complete that answer. We didn't ask about this on
18 the direct, but the defense made the choice to go there.

19 THE COURT: I don't think they went anywhere other
20 than the way in which they were responding to the direct
21 examination. They didn't ask any questions about expectations
22 or things like that. Literally their questioning is focused on
23 the actual operation of the system as distinguished from things
24 like mortgages. And so I'm going to sustain the objection.

25 (Continued on next page)

O4AVEIS3

Jain - Recross

1 (In open court)

2 BY MR. BURNETT:

3 Q. All right, Mr. Jain. Do you recall you were asked about
4 whether someone who borrows from Mango Markets needs to say
5 anything about whether they have an intent to repay the loan
6 eventually?

7 A. I remember having that topic.

8 Q. What does someone need to do on Mango Markets in order to
9 keep a loan open?

10 A. Right. I think we talked about this before.

11 There's four elements of borrow on Mango Markets.

12 Number one, you need to put in assets, and those
13 assets act as the collateral for getting your loans.

14 Number two, you need to maintain a sufficient amount
15 of collateral so that the loan balance can remain outstanding.

16 Number three, you got to pay your interest on your
17 loan.

18 And number four, when you return the loan back, you
19 have to repay the principal.

20 MR. BURNETT: No further questions, your Honor.

21 THE COURT: Thank you, Mr. Burnett.

22 Mr. Klein.

23 RECROSS EXAMINATION

24 BY MR. KLEIN:

25 Q. If you don't maintain, you just get liquidated, right?

O4AVEIS3

Shipe - Direct

1 A. There is a procedure where the consequence of having your
2 health go below zero is liquidation.

3 Q. That is the consequence; correct?

4 A. The consequence of the health going below zero is a
5 liquidation event, sure.

6 MR. KLEIN: Nothing further, your Honor.

7 THE COURT: Thank you, Mr. Jain. You're done.

8 THE WITNESS: Okay.

9 (Witness excused)

10 THE COURT: Mr. Davis?

11 MR. DAVIS: Yes, your Honor.

12 THE COURT: You can call the government's next
13 witness.

14 MR. DAVIS: The government calls Tyler Shipe.

15 TYLER SHIPE,

16 called as a witness by the Government,

17 having been duly sworn, testified as follows:

18 THE COURT: You may proceed.

19 DIRECT EXAMINATION

20 BY MR. DAVIS:

21 Q. Good morning, Mr. Shipe.

22 A. Good morning.

23 Q. What do you do for work?

24 A. I'm a software developer.

25 Q. What kinds of things do you do as a software developer?

O4AVEIS3

Shipe - Direct

1 A. I write code for front ends or user interfaces.

2 Q. Can you explain to the jury what a user interface is?

3 A. Yeah. That's like the website or web page that you would
4 see and interact with the visual aspect.

5 Q. Are you familiar with something called Mango Markets?

6 A. Yes, I am.

7 Q. How are you familiar with Mango Markets?

8 A. I worked on the user interface for Mango Markets.

9 Q. All right. Can we put some dates on when you started to
10 work on the interface for Mango Markets.

11 A. Yeah. I started working on Mango Markets in January of
12 2021.

13 Q. Did there come a time where you no longer were working on
14 the interface?

15 A. Yes, sometime last year, 2023.

16 Q. So besides working on the user interface for Mango Markets,
17 do you contribute to Mango Markets in any other way?

18 A. I assisted in small roles, helping with some other projects
19 in Mangos, but primary role was on user interface.

20 Q. I want to direct your attention to a particular point in
21 time. Were you a contributor on Mango Markets on October 11th,
22 2022?

23 A. Yes, I was.

24 Q. What, if anything, happened on Mango Markets that day?

25 A. The Mango Markets platform was exploited.

O4AVEIS3

Shipe - Direct

1 Q. What do you mean by "exploited"?

2 A. All funds were withdrawn from the platform and the platform
3 stopped working.

4 Q. All right. You said all the funds were withdrawn from the
5 platform. About how much cryptocurrency was withdrawn from the
6 platform on that day?

7 A. It was approximately 110 million.

8 Q. And before those funds were taken off the platform, whose
9 funds were those?

10 A. All of the users or depositors of Mango Markets.

11 Q. Can you give the jury a sense of how many users were using
12 Mango Markets around that time?

13 A. Hundreds, thousands. I don't know the exact number.

14 Q. All right. So after 100 million in cryptocurrency was
15 withdrawn, what happened to Mango Markets the platform?

16 A. It stopped functioning.

17 Q. Why did it stop functioning?

18 A. Because all of the users' funds were withdrawn from the
19 platform, and all of the functions of the Mango Markets
20 platform required that there be users' funds on there.

21 Q. Could users access their funds that they have on Mango
22 Markets during this time?

23 A. No.

24 Q. We're going to come back to Mango Markets in a second. But
25 why don't we start with a little bit about you.

O4AVEIS3

Shipe - Direct

1 Can you tell the jury where you went to school, what
2 your educational background is.

3 A. Yeah. I got my bachelor's from the University of Kentucky.

4 Q. And after you got your bachelor's, what did you do for
5 work?

6 A. I started out working for Fidelity in finance, and then
7 switched into software development a year or two after that.

8 Q. And how long after you switched into software development
9 did you begin contributing to Mango Markets?

10 A. I think it was about seven years later.

11 Q. Before we get into details about Mango Markets, I want to
12 talk about some data.

13 Before today, did you review Government Exhibits 986,
14 992, 993, 999, 1001, and 1002?

15 A. Yes, I did.

16 Q. What are they, at a high level?

17 A. It's transactions, trade data from the Mango Markets
18 platform, some stats for Mango Markets.

19 MR. DAVIS: Can we pull up the stip, 1701 stipulation.

20 Then in paragraph 3, which has already been read to
21 the jury, Government Exhibits 900, 902 through 1002, 1004
22 through 1007, and 1009 through 1011 are true and correct copies
23 of records maintained by Mango Labs.

24 The government offers Government Exhibit 986, 992,
25 983, 999, 1001 and 1002.

O4AVEIS3

Shipe - Direct

1 THE COURT: Any objection?

2 MR. TALKIN: No, your Honor.

3 THE COURT: Those documents will be admitted as
4 evidence.

5 (Government's Exhibits 986, 992, 983, 999, 1001, 1002
6 received in evidence)

7 MR. DAVIS: Separately, your Honor, I've shown counsel
8 before and also covered by this stip, four additional exhibits
9 I'd like to offer at this time: 988, 989, 990, and 991.

10 MR. TALKIN: Again, no objection.

11 THE COURT: Those will be admitted.

12 (Government's Exhibits 988, 989, 990, 991 received in
13 evidence)

14 BY MR. DAVIS:

15 Q. All right. So let's talk about the data that you reviewed.

16 By reviewing this data, could you learn about trading
17 activity for certain users on Mango Markets?

18 A. Yes, you could.

19 Q. Could you learn with their deposits, withdrawals, and
20 borrow history?

21 A. That's correct.

22 Q. Would you also be able to look at the number of perpetual
23 trades that were open at a particular time on Mango Markets?

24 A. Yes, that's right.

25 Q. And finally, would you be able to analyze the trading for

O4AVEIS3

Shipe - Direct

1 the account that withdrew the funds from Mango Markets on
2 October 11th, 2022?

3 A. Yes.

4 Q. All right. I want to switch gears for a second.

5 MR. DAVIS: There's something on the screen, if you
6 could take it down, please.

7 Q. So I want to talk about Mango Markets for a second.

8 Have there been different versions of Mango Markets?

9 A. Yes, there have.

10 Q. What version was in effect in October of 2022?

11 A. Version 3.

12 Q. Now, at that time, did Mango Markets have any terms of
13 service?

14 A. No, did not.

15 Q. What documentation, if any, did Mango Markets provide to
16 its users?

17 A. There was docs.mango.markets.

18 MR. DAVIS: Can we pull up Government Exhibit 1011,
19 please. If we could scroll to the second page of this exhibit,
20 please.

21 Q. Mr. Shipe, do you recognize this document?

22 A. Yes, it's from documentation.

23 Q. Can you explain what this document does?

24 A. Explains at a high level what Mango Markets is.

25 Q. I want to talk about one particular feature in this

O4AVEIS3

Shipe - Direct

1 document. Do you know what above bounty is?

2 A. Yes, I do.

3 Q. What is above bounty?

4 A. It's a payment made for somebody who would report a problem
5 or bug with the platform.

6 Q. Do you know if Mango Markets had above bounty program in
7 October of 2022?

8 A. Yes, I did.

9 MR. DAVIS: All right. Can we turn to page 123 of
10 this exhibit, please. All right. Can we zoom in on the top of
11 the screen, so I guess from above bounty down to the chart, the
12 end of the chart. Thanks so much.

13 Q. All right. Mr. Shipe, what are we looking at here?

14 A. This is the bug bounty from the documentation.

15 Q. Could you read under "Program Overview"?

16 A. Yeah. "This bug bounty is specifically for Mango Markets
17 on-chain program code. UI only bugs are omitted."

18 Q. Do you see where it says "severity critical"?

19 A. Yes.

20 Q. What does that mean?

21 A. These are the bugs that would have the highest consequence,
22 most critical bugs.

23 Q. Do you see the column that says "bug bounty"?

24 A. Yes.

25 Q. Could you read under the critical row what the bug bounty

O4AVEIS3

Shipe - Direct

1 was for a critical bug?

2 A. It's ten percent of the value of the hack, up to \$1
3 million.

4 Q. All right. Now, can you explain to the jury how this works
5 if someone would want to claim a bug bounty?

6 A. Yeah. So they would report it to the DAO or in the
7 Discord, somehow to people in the Mango Markets community. And
8 if it's found that the bug exists, then the bug would be
9 patched and there would be a proposal in the Mango DAO to give
10 out the funds from the bug bounty.

11 MR. DAVIS: Can we pop out of this screen for a
12 second.

13 Q. Do you see at the bottom --

14 MR. DAVIS: Can we pop out from invalid bug bounties
15 down to the end.

16 Q. Do you see where it says invalid bug bounties?

17 A. Yes.

18 Q. Could you read from invalid bug bounties through the first
19 bullet.

20 A. Yeah. "The following are out of scope for the bug bounty:
21 Attacks that the reporter has already exploited themselves,
22 leading to damage."

23 Q. Pausing there for a second.

24 Who is the reporter in the first bullet? What does
25 that mean?

O4AVEIS3

Shipe - Direct

1 A. The person who found the bug and then disclosed it.

2 Q. What does "exploited themselves" mean?

3 A. Means that they would have, like, acted upon the bug they
4 found to somehow harm the protocol.

5 Q. And lastly, what does the damage in this sentence mean?

6 A. Whatever the harm was to the protocol, could be withdrawing
7 of funds.

8 Q. So if a user exploited a bug themselves, would they be
9 entitled to a bug bounty?

10 A. No.

11 Q. I want to now talk about --

12 MR. DAVIS: We can take this down.

13 Q. And I want to turn to October 11th, 2022.

14 Where were you when you first learned that there was a
15 problem on Mango Markets?

16 A. I was at home.

17 Q. How did you learn about it?

18 A. It was through a Telegram chat that someone sent.

19 Q. What was the problem?

20 A. Just that there was a hack on Mango Markets.

21 Q. Had anything like this happened before on Mango Markets?

22 A. No, not like this.

23 MR. DAVIS: Judge, may I approach?

24 THE COURT: You may approach.

25 Q. Mr. Shipe, do you see the binder in front of you that

O4AVEIS3

Shipe - Direct

1 includes Government Exhibits 914 through 921, and 923 through
2 932?

3 A. Yes, I do.

4 Q. What are these documents?

5 A. These are screenshots of the Mango Markets interface, the
6 website.

7 Q. And how do these screenshots relate to the data we just
8 looked at earlier?

9 A. The data that we looked at earlier is like what feeds the
10 data that you see on the website.

11 Q. And would this be kept and created and maintained in the
12 ordinary course of business?

13 A. Yes.

14 MR. DAVIS: All right. The government offers
15 Government Exhibits 914 through 921, and 923 through 932.

16 MR. TALKIN: No objection, your Honor.

17 THE COURT: They will be admitted.

18 (Government's Exhibits 914 through 921, 923 through
19 932 received in evidence)

20 MR. DAVIS: Can we please publish to the jury
21 Government Exhibit 915.

22 Q. Mr. Shipe, do you see what's on the screen?

23 A. Yes.

24 Q. All right. At a high level, what are we looking at here?

25 A. This is the account page from the Mango Markets website.

O4AVEIS3

Shipe - Direct

1 Q. And talk me through how we should think about whose account
2 this is.

3 A. Well, this is the account that exploited Mango Markets.
4 And we're looking at the history of deposits. And there's a
5 account address, 4ND8F, that helps identify the account.

6 Q. All right. So let's now talk about what's reflected in
7 these two rows on the screen.

8 What's on these two rows on the screen?

9 A. These are deposits that were made for this account.

10 Q. Can you tell the jury about the two deposits shown on the
11 screen?

12 A. Sure. The first deposit is at the bottom there on October
13 11th, at 6:08, there's \$100 deposit of USDC token.

14 Q. I'm sorry to interrupt. Please go ahead.

15 A. The next one is another deposit of \$5 million on October
16 11th at 6:18 p.m.

17 Q. Got it. So how much was the second deposit?

18 A. \$5 million.

19 MR. DAVIS: All right. We can take down this screen.

20 And can we pull up Government Exhibit 919.

21 Q. All right. What is this screen showing?

22 A. This is the same screen, but for a different account,
23 CQVKS. It's also the deposit history for that account.

24 Q. Got it.

25 So this is a different account than the first screen

O4AVEIS3

Shipe - Direct

1 we looked at; is that right?

2 A. That's correct.

3 Q. All right.

4 Can you walk the jury through the deposits in this
5 account.

6 A. Yup. There's two deposits. The first one, October 11th,
7 6:07 p.m., is for one dollar; and the second one, October 11th,
8 at 6:19 p.m., for roughly \$5 million.

9 Q. Got it.

10 MR. DAVIS: All right. Why don't we take down
11 Government Exhibit 919.

12 Q. All right. So that's the deposits.

13 Now I want to talk about trade history.

14 MR. DAVIS: So can we pull up Government Exhibit 916.

15 All right. If we could zoom the same way. Thank you.

16 Q. All right. So, Mr. Shipe, what is this screenshot showing?

17 A. This is the history of trading activity for the 4ND8F
18 account.

19 Q. Got it.

20 So is this the first account we looked at?

21 A. Yes.

22 Q. All right.

23 And you said trading history. So what does that mean?

24 A. These are trades - in this case buys - that the account
25 made on Mango Markets.

O4AVEIS3

Shipe - Direct

1 Q. Got it.

2 So I want to talk through each column, starting with
3 the first column from the bottom.

4 So do you see where it says "market"?

5 A. Yes.

6 Q. What does it say under "market" for the first column on the
7 bottom?

8 A. MNGO-PERP.

9 Q. What does that mean?

10 A. That's the perpetual futures market for the MNGO token.

11 Q. Do you see where it says "side"?

12 A. Yes.

13 Q. What does it say on under "side"?

14 A. It says "buy."

15 Q. What does that mean?

16 A. It means they purchased a contract of -- on the MNGO-PERP
17 market.

18 Q. All right. Do you see where it says "size"?

19 A. Yes.

20 Q. What does that mean?

21 A. That's the number of contracts that were purchased.

22 Q. And what's the size for this first one?

23 A. One.

24 Q. All right. Then do you see where it says "price"?

25 A. Yes.

O4AVEIS3

Shipe - Direct

1 Q. What does that mean?

2 A. That's the price that the contract was purchased at.

3 Q. And then do you see -- keep going. Do you see where it
4 says "value"?

5 A. Yes.

6 Q. What does the value mean?

7 A. That's like the size multiplied by a price.

8 Q. So is that the value of the contract or shorthand for it?

9 A. That's correct.

10 Q. All right.

11 And then do you see where it says "liquidity"?

12 A. Yes.

13 Q. And then it says "taker." What does that mean?

14 A. The taker is the -- it's actually easier to talk about the
15 maker. Like the maker would put up an order on an order book;
16 they would offer at a certain price and size. And the taker is
17 the person who matched with the order that was on an order
18 book. So they took another offer that was up there.

19 Q. And when you say they took another offer, who did they take
20 that offer from?

21 A. A maker.

22 Q. And is a maker another user of Mango Markets?

23 A. That's right.

24 Q. All right.

25 So then there's two more columns. What does the fee

O4AVEIS3

Shipe - Direct

1 column mean?

2 A. The fee that Mango Markets charged for the MNGO-PERP.

3 Q. All right.

4 And then finally, do you see where it says "time"?

5 A. Yes.

6 Q. All right. What's the time of the first one from the
7 bottom, the first perpetual from the bottom?

8 A. October 11th, 6:23 p.m.

9 Q. And are the seconds also listed there?

10 A. Yes, seconds are, too. 44 seconds.

11 Q. Okay. So that's the first one.

12 Let's go to the second row up. Do you see that?

13 A. Yes.

14 Q. All right. What instrument is in the second row up?

15 A. It was also MNGO-PERP.

16 Q. And what side of the MNGO-PERP was this user buying?

17 A. It was a buy.

18 Q. And what was the size of this perp?

19 A. 261,780,104.

20 Q. All right. And what was the price listed?

21 A. Approximately three cents.

22 Q. And what was the value of this perpetual?

23 A. Approximately \$10 million.

24 Q. Which side of the transaction was this user on?

25 A. The maker.

O4AVEIS3

Shipe - Direct

1 Q. And what was the time for this transaction?

2 A. 6:24:50.

3 Q. All right. Was that approximately a minute after the first
4 perpetual we discussed?

5 A. That's correct.

6 Q. All right. Let's go up to the next in time perpetual. Can
7 you walk us through what's happening here in this third one?

8 A. Yeah. So this is also a buy on the MNGO-PERP market for
9 222,688,514 contracts at the same price of approximately three
10 cents, for a value of approximately 8.5 million. This one is
11 the maker as well, and that happened on October 11th at 6:25
12 p.m. and 39 seconds.

13 Q. Got it.

14 So is that one minute after approximately the second
15 perpetual buy?

16 A. That's correct.

17 Q. All right. Let's talk about the last one from the top.

18 Can you take us through what that last perpetual buy
19 was?

20 A. Yup. That was an MNGO-PERP as well. It was a buy for
21 3,833,491 contracts at the same price, approximately three
22 cents, for a value of about 146,000. This is also the maker at
23 6:25:56, on October 11.

24 Q. Is that less than a minute after the third buy we talked
25 about?

O4AVEIS3

Shipe - Direct

1 A. Yes.

2 Q. All right.

3 And just stepping back for a second, these are all
4 buys of a Mango perpetual, right?

5 A. Yes.

6 Q. How does a user who buys a Mango perpetual make money off
7 of that transaction?

8 A. They would eventually need to sell it.

9 Q. What happens to the value of these perpetuals if the value
10 of Mango of increases?

11 A. The value of perpetuals go up.

12 MR. DAVIS: Let's take this down and turn to 926.

13 Q. All right. What are we looking at here?

14 A. This is the account history of trades for the CQVKS
15 account.

16 Q. All right. Now, this is the second account we've been
17 looking at; is that right?

18 A. That's correct.

19 Q. All right. And is this the same trade data that we were
20 looking at before with the first account?

21 A. Trade data, yes. A different history here though.

22 Q. All right. Let's talk about that history.

23 Can you take the jury through the first-in-time trade
24 for this account.

25 A. Yeah. This is also on the MNGO-PERP market. This is a

O4AVEIS3

Shipe - Direct

1 sell though for 261,780,104 contracts, at the price of
2 approximately three cents, for a value of approximately \$10
3 million. It was the taker in this case, and that happened on
4 October 11th at 6:24 p.m. and 50 seconds.

5 Q. So pausing there. A couple of differences from the first
6 account we looked at.

7 So this is a sell side transaction; is that right?

8 A. That's correct.

9 Q. So what happens to the value of these perpetuals if the
10 value of Mango goes up?

11 A. They're worth less.

12 Q. And then you said there the taker in liquidity. What does
13 that mean?

14 A. That means they took an offer that was already up on the
15 order book. Somebody else's order.

16 Q. All right. So the first one happened at 6:24:50.

17 Let's turn now to the second one. Can you walk us
18 through the second transaction?

19 A. Yeah. This is also for the MNGO-PERP market. This is a
20 sell as well for 222,688,514 contracts, approximately three
21 cents, for a value of approximately 8.5 million. This is
22 taker, and happened on October 11, 6:25 p.m., 39 seconds.

23 Q. So how soon after the first trade did this one happen?

24 A. It was about a minute.

25 Q. All right. Let's go to the last in time. Can you walk us

O4AVEIS3

Shipe - Direct

1 through the third sell Mango perp for this account.

2 A. Yeah. The third sell was for the MNGO-PERP market as well.

3 It was a sell for 3,833,491 contracts. Price is also

4 approximately three cents, for a value of 146,000

5 approximately. And it was a taker as well. Happened on

6 October 11th at 6:25:56 p.m.

7 MR. DAVIS: All right. Can we now pull up the last
8 two exhibits side-by-side and show 926 and 916 side-by-side.

9 And can we pop out the three -- the first three transactions
10 for each account.

11 Q. So I'm going to focus on --

12 MR. DAVIS: If we could do the top three. For the
13 bottom transaction, if you could move the zoom up a little bit
14 just to show the first three transactions.

15 Q. We can just talk about them.

16 Mr. Shipe, do you see the first three -- sorry.

17 MR. DAVIS: Perfect. Thank you so much.

18 Q. All right. I want to compare these two trade data here.

19 Are these trades -- do they appear to be executed
20 around the same time?

21 A. Yes, the time stamps match.

22 Q. Do they match to the second?

23 A. Yes, they do.

24 Q. Are the trades of the same value?

25 A. Yes, they are.

O4AVEIS3

Shipe - Direct

1 Q. What about the same number of contracts?

2 A. Also the same number of contracts.

3 Q. Now, is one side the maker and the other the taker?

4 A. That's correct.

5 Q. And what about size of the transactions, is one buying and
6 the other selling?

7 A. That's correct.

8 Q. All right. And stepping back for a second, how do the size
9 of these trades historically compare to previous Mango
10 perpetual transactions on the platform?

11 A. Significantly larger.

12 Q. As a contributor to the platform, would it matter to you if
13 you knew that someone was intentionally increasing the value of
14 a perpetual in Mango Markets?

15 A. Yes.

16 Q. Why would that matter to you?

17 A. Well, depends on the reason that it's happening, but it
18 could lead to --

19 MR. TALKIN: Objection.

20 THE COURT: Overruled.

21 A. Depends on the reasoning that it's happening. If it's
22 because of some type of activity that was not in the normal
23 course of how Mango Markets operated, they could lead to
24 liquidations that maybe shouldn't happen; could lead to
25 somebody withdrawing funds that they shouldn't be able to.

O4AVEIS3

Shipe - Direct

1 MR. TALKIN: Objection, your Honor.

2 THE COURT: It's overruled.

3 Q. You were saying about liquidations?

4 A. Yeah. So it could lead to liquidations that wouldn't have
5 happened otherwise; could lead to somebody withdrawing funds
6 that they wouldn't have been able to otherwise as well.

7 MR. DAVIS: All right.

8 Let's take this down and go to Government Exhibit 917.

9 Q. All right. What is this screenshot showing?

10 A. This is a history of withdrawals for this account, 4ND8F.

11 Q. Is this the first account we looked at?

12 A. Yes.

13 Q. Fair if I call that the buy side account?

14 A. Sure.

15 Q. Can you walk the jury through the withdrawals, starting
16 from the first in time?

17 A. Yup. The first is at the bottom there. And that's a
18 withdrawal on October 11th, 6:29 p.m., withdrawing the USDC
19 token for an amount of \$50 million.

20 Q. Can we keep going through each of these up to the last one.

21 A. Sure. The next one was at 6:30 p.m. on October 11th for
22 the SOL token. 400,000 SOL was removed and the value was
23 approximately 12.5 million.

24 And then at 6:37 p.m. October 11th, SOL was withdrawn
25 again. 361,577 SOLs withdrawn, for a value of approximately

O4AVEIS3

Shipe - Direct

1 11.3 million.

2 And at 6:37 as well, MSOL was withdrawn, there was
3 798,000 that was withdrawn, for a value of approximately 26.7
4 million. And at 6:37 p.m., BTC token. 281 BTC was withdrawn,
5 for a value of approximately 5.3 million.

6 Q. Can I pause you for a second?

7 A. Yes.

8 Q. We've been talking about a number of these tokens. Can you
9 explain what's being withdrawn here?

10 A. The tokens themselves. So BTC is Bitcoin.

11 Q. Are these types of cryptocurrency?

12 A. Yeah, these are cryptocurrencies.

13 Q. Got it.

14 We left off at BTC. What happens at 6:41 p.m.?

15 A. More USDC is withdrawn, for a value of approximately 2.8
16 million at 6:41. And then USDT tokens withdrawn at 6:41,
17 for -- the value is approximately 3.2 million. And at 6:45,
18 the SRM token, there's 2,354,260 that were withdrawn, for a
19 value of approximately 1.7 million.

20 And then at 6:45, MNGO tokens were withdrawn, 32
21 million of them, approximately, for a value of 14.7 million,
22 approximately.

23 Q. Got it.

24 Just eyeballing this, approximately how much value in
25 cryptocurrency was withdrawn in these withdrawals?

O4AVEIS3

Shipe - Direct

1 A. Over 100 million. 110 million.

2 Q. And how long -- what was the difference in time between the
3 first withdrawal and the last withdrawal, approximately?

4 A. Less than 20 minutes.

5 MR. DAVIS: All right.

6 Can we now turn to Government Exhibit 921.

7 Q. All right. What is this -- before we zoom in, what is this
8 account showing?

9 MR. DAVIS: Thank you so much.

10 A. This is a history of withdrawals as well for the CQVKS
11 account.

12 Q. Is this the sell side account that we were talking about
13 earlier?

14 A. Yes.

15 MR. DAVIS: Can you zoom in on these withdrawals.

16 Q. All right. I won't make us go through each one line by
17 line, but can you tell me when the first one in time was?

18 A. Yeah. 6:52 p.m.

19 Q. And the approximate value that was withdrawn?

20 A. \$289,000.

21 Q. Can you tell me when the last one in time was?

22 A. Yeah. 6:57 p.m., for a value of roughly \$7,000.

23 Q. And just eyeballing, how much cryptocurrency was withdrawn
24 during this time?

25 A. Looks like around a million dollars.

O4AVEIS3

Shipe - Direct

1 Q. What was the difference in time between the first
2 withdrawal and the last withdrawal?

3 A. About five minutes.

4 MR. DAVIS: All right. Can we now show Government
5 Exhibits 921 and 917 side-by-side. And if we could pop out the
6 withdrawals for each account, please. Thank you.

7 We can take it down. I can ask it a different way.

8 You can take down the pop-out. It's okay.

9 Q. So starting with the RNGNA account, that's the buy side
10 account, right?

11 A. Can you say which one?

12 Q. Yeah, sorry, on the right side of the screen.

13 A. Oh, yeah.

14 Q. When is the last withdrawal on that account in time?

15 A. That's at 6:45 p.m. on October 11th.

16 Q. All right. Now, turning to the other account, the sell
17 side account, when's the first withdrawal in that account?

18 A. This is October 11, 6:52 p.m.

19 MR. DAVIS: Okay. Let's take that down please.

20 And can we now pull up Government Exhibit 914.

21 Q. What is Government Exhibit 914 showing?

22 A. This is the overview account page for the 4ND8F account.

23 Q. Do you see where it says "borrows" there?

24 A. The borrow column?

25 Q. Yes.

O4AVEIS3

Shipe - Direct

1 A. Yes.

2 Q. What does the borrow column show?

3 A. This is the number of tokens that were borrowed for this
4 account.

5 Q. And can you give a rough estimate of approximately how many
6 USDC tokens were borrowed on this account?

7 A. Yeah, approximately 54 million.

8 Q. As a contributor to Mango Markets, would it matter to you
9 if someone was borrowing from the platform without the intent
10 to maintain collateral to liquidate?

11 MR. TALKIN: Objection, your Honor.

12 THE COURT: Overruled.

13 A. Yes, it would.

14 Q. Why would that matter to you?

15 A. Because if the borrowed and liquidations could not proceed,
16 then that would cause problems with the whole platform.

17 Q. What kind of problems?

18 A. It could cause -- deplete the insurance fund, socialize
19 losses, users would lose funds.

20 MR. DAVIS: All right.

21 Let's take down these exhibits.

22 Q. Were there any funds left on the platform after these
23 trades on October 11th?

24 A. No.

25 Q. What happened to the platform next?

O4AVEIS3

Shipe - Direct

1 A. It stopped working.

2 Q. Did there come a time where the person who withdrew made a
3 proposal to return some of the funds?

4 A. Yes.

5 Q. All right.

6 MR. DAVIS: Your Honor, may I approach?

7 THE COURT: You may approach.

8 MR. DAVIS: I've shown the witness what's been marked
9 for identification as Government Exhibits 1003 and 901.

10 Q. Do you recognize those?

11 A. Yes, I do.

12 Q. What are they?

13 A. These are proposals made on the Mango DAO website.

14 Q. Are they true and accurate copies of those proposals?

15 A. Yes.

16 MR. DAVIS: The government offers Government Exhibit
17 1003 and 901.

18 MR. TALKIN: No objection.

19 THE COURT: They will be admitted.

20 (Government's Exhibits 901, 1003 received in evidence)

21 MR. DAVIS: Can we please publish Government Exhibit
22 1003.

23 Q. Do you see it on your screen?

24 A. Yes, I do.

25 Q. What is this? What are we looking at?

O4AVEIS3

Shipe - Direct

1 A. This is a proposal on the Mango DAO website. We're looking
2 at the title and description.

3 Q. And can you read the title of this proposal?

4 A. Yes. It's "Repay Bad Debt."

5 Q. All right. I'm going to ask you to please read the first
6 sentence there.

7 A. It says: "Hi all, the Mango treasury has about 70 million
8 USDC available to repay bad debt."

9 Q. All right. Do you see where it says "the Mango treasury"?

10 A. Yes.

11 Q. What's the Mango treasury?

12 A. These are the funds in the Mango DAO.

13 Q. All right. Can you read the next sentence?

14 A. It says: "I propose the following."

15 Q. Pausing there. Who do you understand "I" to be?

16 A. The person that exploited the Mango Markets platform.

17 Q. Can you read the next sentence, please.

18 A. "If this proposal passes, I will send the MSOL, SOL, and
19 MNGO in this account to an address announced by the Mango
20 team."

21 Q. All right. Pausing there for a second.

22 In the accounts we just looked at, was some of the
23 cryptocurrency that was withdrawn MSOL, SOL, and MNGO?

24 A. Yes.

25 Q. Was that all of the cryptocurrency that was withdrawn?

O4AVEIS3

Shipe - Direct

1 A. No, there were more.

2 Q. All right. Can you please read the next sentence.

3 A. "The Mango treasury will be used to cover any remaining bad
4 debt in the protocol, and all users without bad debt will be
5 made whole."

6 Q. All right. Pausing there for a second.

7 Do you have an understanding of what "bad debt" means?

8 A. Not really.

9 Q. All right. Can we keep going to the next sentence, please.

10 A. Yup. "Any bad debt will be viewed as a bug bounty
11 insurance paid out of the Mango insurance fund."

12 Q. All right. And do you see where it says "bug bounty"?

13 A. Yes.

14 Q. What do you interpret that to mean?

15 A. A payment that would be given for reporting a bug.

16 Q. Now, at this point was the cryptocurrency withdrawn from
17 the platform?

18 A. Yes.

19 Q. All right. Can we read the next sentence, please.

20 A. "By voting for this proposal, Mango token holders agree to
21 pay this bounty and pay off the bad debt with the treasury and
22 waive any potential claims against accounts with bad debt and
23 will not pursue any criminal investigations or freezing of
24 funds once the tokens are sent back as described above."

25 Q. Got it.

O4AVEIS3

Shipe - Direct

1 So I want to focus on this last sentence.

2 What did you understand the proposer to be asking with
3 respect to pursuing any criminal investigations?

4 A. To not pursue them.

5 Q. What did you understand the proposal to be asking with
6 respect to the freezing of funds?

7 A. To not contact some authority over the funds to freeze the
8 transactions on the blockchain.

9 (Continued on next page)

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O4ACeis4

Shipe - Direct

1 BY MR. DAVIS:

2 Q. Do you know what happened to this proposal?

3 A. It failed, did not pass.

4 Q. Did you vote on this proposal?

5 A. I did not.

6 Q. Why not?

7 A. I didn't really know about the last sentence here, what was
8 legal here, what was allowed. It didn't make a lot of sense to
9 me.

10 MR. DAVIS: We can take down Government Exhibit 1003.
11 If we can publish Government Exhibit 901.

12 Q. What are we looking at here?

13 A. This is another Mango DAO proposal.

14 Q. What is this one entitled?

15 A. Repay bad debt No. 2.

16 Q. Can you read the text under repay bad debt No. 2.

17 A. It says to the controller of the wallet.

18 Q. If you could read the next sentence, please.

19 A. We are seeking to make users whole to the extent possible.
20 This is the amount you have agreed to return.

21 Q. Pausing there for a second. Do you see the "we" in the
22 first sentence?

23 A. Yes.

24 Q. Who do you understand that to be?

25 A. The person who wrote this.

O4ACeis4

Shipe - Direct

1 Q. Who are they speaking on behalf of?

2 A. The Mango doubt.

3 Q. Do you see in the second sentence, this is the amount you
4 have agreed to return?

5 A. Yes.

6 Q. Who do you understand the "you" to be there?

7 A. The person who exploited the Mango Markets platform.

8 Q. There's a chart here. Do you see that?

9 A. Yes.

10 Q. What is that showing?

11 A. This is showing the individual tokens that need to be
12 returned and the amount of the tokens.

13 Q. And was this all of the cryptocurrency that was withdrawn
14 from the platform on October 11th, 2022?

15 A. No.

16 Q. Let's go to the text beneath the chart.

17 Do you see the second paragraph from the bottom,
18 "within 12 hours"?

19 A. Yes.

20 Q. Can you read that please.

21 A. Sure. Within 12 hours of the proposal opening, you shall
22 send back the assets, other than USDC, NSOL, MNGO, and SOL as a
23 show of good faith. The remaining assets shall be sent within
24 12 hours once the vote is complete and passes.

25 Q. Can you please read the final paragraph here.

O4ACeis4

Shipe - Direct

1 A. Yeah. The funds sent by you and the Mango DAO treasury
2 will be used to cover any remaining bad debt in the protocol.
3 All Mango depositors will be made whole. By voting for this
4 proposal, Mango token holders agree to pay off the bad debt
5 with the treasury and waive any potential claims against
6 accounts with bad debt and will not pursue any criminal
7 investigations or freezing of funds once the tokens are sent
8 back as described above.

9 Q. Do you know what happened to this proposal?

10 A. It passed.

11 Q. Did you vote on this proposal?

12 A. I did not.

13 Q. Why not?

14 A. Because of that last paragraph. Again, didn't understand
15 if that was legal or what it really meant.

16 MR. DAVIS: Let's take this down now.

17 Q. After this proposal was passed, what happened next with
18 respect to the Mango's DAO's actions?

19 A. Then there were proposals to figure out how to reimburse
20 the users of Mango Markets.

21 Q. Where were those proposals made?

22 A. On the same Mango DAO website.

23 Q. Who ultimately made the decision to reimburse Mango
24 Markets' users?

25 A. The Mango DAO.

O4ACeis4

Shipe - Direct

1 Q. How much did the Mango DAO provide in funds to make users
2 whole?

3 A. Approximately \$40 million.

4 MR. DAVIS: Your Honor, may I have one moment?

5 THE COURT: Yes, you may.

6 (Pause)

7 Q. Apologies. Can we backtrack one second.

8 A. Sure.

9 Q. Approximately how long after October 11th, 2022 was the
10 first proposal we discussed made?

11 A. Within a few days I think.

12 Q. And then what about the difference in time between the
13 first proposal and the second proposal that ultimately passed?

14 A. I think that was also within a few days. I'm not sure.

15 MR. DAVIS: No further questions at this time.

16 THE COURT: Thank you.

17 Mr. Talkin, would you like to proceed now or would you
18 like to proceed after the break?

19 MR. TALKIN: I think it makes sense to proceed after
20 the break, your Honor.

21 THE COURT: Okay. We will take our break and be back
22 at 12:15.

23 (Continued on next page)

O4ACeis4

(Jury not present)

THE COURT: Mr. Shipe, you can leave the stand now, but you'll still be under oath. Make sure you don't talk to anyone about your testimony, anything having to do with this case, including anyone on the government's side. All right?

THE WITNESS: Sure.

THE COURT: Have a good break. You can leave the stand, exit the courtroom.

(Witness not present)

Other than the Mango Labs issue, anything that the government needs to raise?

MR. BURNETT: Just on the tax, your Honor, from the questioning, it sounds like there's not a basis to put in the tax records. I want to make sure everyone's on the same page about that.

THE COURT: Mr. Klein, do you intend to offer those documents into evidence?

MR. KLEIN: Your Honor, can I talk to counsel here and confirm?

THE COURT: Other than that, anything from the government's side?

MR. BURNETT: Sorry. One last thing, your Honor. There are a few objections that had come up to Government Exhibits 115 and 116 from the defense that we had some discussions about with them about whether they were going to

O4ACeis4

1 propose a stipulation. There hasn't been a stipulation
2 proposed and those are exhibits that are going to come in in
3 the afternoon.

4 THE COURT: So let's cover the tax documents first.

5 Mr. Klein, have you had a chance to talk about that?

6 MR. KLEIN: I don't think we need them in, your Honor.

7 THE COURT: Okay. Resolved. Next.

8 MR. BURNETT: 115 and 116, we're going to have a
9 witness, Special Agent DeCapua, who probably later this
10 afternoon will go through sort of the flow of funds through the
11 various wallets and accounts that were involved in the scheme.

12 In order to establish Mr. Eisenberg's control over two
13 accounts – one cryptocurrency wallet account and the other an
14 FTX account – we're going to introduce text messages. One is
15 Government Exhibit 115, which is where he texts about the proof
16 of funds from one wallet, and the other is Government Exhibit
17 116 where he messages with a person named Dimitriy about
18 getting this FTX account.

19 As to that Dimitriy one, we had originally marked like
20 a longer version of it that had some sanction stuff mentioned
21 that the defense caught, so we have reproduced a shortened
22 version that excises any type of like sanctions discussion.

23 So I think the government's plan right now is to offer
24 those into evidence and to prove up that Mr. Eisenberg used
25 these accounts that way and through other evidence. We'll

O4ACeis4

1 consider a stipulation, but I am not sure we're going to accept
2 one because I think because we would like to prove it up
3 potentially. So I think if there's going to be an issue on the
4 exhibits, we should air it now.

5 THE COURT: Mr. Klein, do you have a proposed
6 stipulation?

7 MR. KLEIN: Your Honor, unfortunately, the person
8 handling this is Ms. Martabano, and she stepped out. I don't
9 have anything. I would like to talk with her.

10 THE COURT: Why don't we address this before the jury
11 comes back.

12 All right. Mango Markets. Who's going to handle
13 that? And do we have counsel for Mango Markets here?

14 MR. BURSHTEYN: Yes, your Honor.

15 THE COURT: You may approach.

16 MR. BURSHTEYN: Thank you, your Honor.

17 Hello, your Honor. Mike Burshteyn on behalf of Mango
18 Labs.

19 THE COURT: How many documents are we talking about
20 here that are in dispute?

21 MR. BURSHTEYN: Your Honor, part of the dispute is the
22 defendant's request for the amount.

23 THE COURT: I thought we had largely resolved this and
24 that there were a small, much smaller number of documents at
25 issue.

O4ACeis4

1 So Mr. Greenspan, are you covering this for the
2 defense?

3 MR. GREENSPAN: I am, your Honor.

4 THE COURT: What's the actual dispute here that the
5 Court needs to resolve?

6 MR. GREENSPAN: That's a good place to start. We
7 received a production, one significant production and one very
8 small production from Mango Labs. They've represented to us
9 that these are all the documents that they are going to
10 produce. And the one thing that's left outstanding is they've
11 told us that they've withheld a certain number of documents for
12 privilege, and we've also seen some redactions on some of the
13 documents they've produced to us.

14 THE COURT: Hold that thought for the moment.

15 I'm eating into your break. So if anyone needs to do
16 something other than listen to this issue, then you're free to
17 leave.

18 Mr. Greenspan, please continue.

19 MR. GREENSPAN: And so, we've tried to negotiate with
20 Mango Labs, and basically they've told us they don't want to
21 produce the privilege log. We said that's okay, but we need
22 some information on which to understand how many documents are
23 withholding, what the nature of the privilege is, let's
24 negotiate on something short of a privilege log. We proposed a
25 categorical approach with some number of documents and asked

O4ACeis4

1 them for more information on documents that didn't involve a
2 lawyer, conversations that didn't involve a lawyer and less
3 information on others. We thought that was a reasonable way to
4 do this. And their counterproposal is we're not going to give
5 you any privilege information at all, you're not entitled to it
6 under the criminal laws, and we just don't think that's
7 correct.

8 THE COURT: What are we talking about in terms of the
9 substance? What's the category such that the documents that
10 are outstanding would meet the Nixon standard?

11 MR. GREENSPAN: We have no idea what documents have
12 been withheld, how many or what they're about. We've reduced
13 the seven requests to one request about communications between
14 and among Mango people about the attack itself. So we think it
15 goes directly to the heart of the matter. We really have no
16 idea what's been withheld from us. We don't even know what the
17 basis is.

18 THE COURT: Give me the relevance and then give me
19 admissibility so that I understand that what you're asking for
20 would satisfy the test. I don't think, while under normal
21 circumstances if you were in civil discovery, it would be a
22 fair argument to say, well, I don't know what's being withheld,
23 but I at least need an understanding that documents within a
24 category that would be both relevant and admissible are being
25 withheld potentially so that I can evaluate it at that high

O4ACeis4

1 level before getting into the details.

2 MR. GREENSPAN: I understand that. Can I have a
3 moment to confer with my client?

4 THE COURT: Yes.

5 (Counsel and defendant conferred)

6 While they're doing that, Mr. Burshteyn, have you
7 collected the documents that have been requested, even if
8 they're being withheld for privilege?

9 MR. BURSHTEYN: Your Honor, yes, we did comply with
10 the Court's order last night. There was some authority I was
11 hoping to present to the Court regarding the standard for *in*
12 *camera* review in this situation. It is in the room.

13 THE COURT: What's the volume?

14 MR. BURSHTEYN: Your Honor, part of our concern is by
15 providing the volume to defendant, that would enable them to
16 continue on this fishing expedition.

17 THE COURT: No, it won't. I won't let it. But, I
18 need know what the volume is. So what is the volume?

19 MR. BURSHTEYN: Your Honor, may I approach, perhaps,
20 and tell it to you?

21 THE COURT: No, you can tell me what the volume is.
22 The volume is not going to bear on my ultimate decision here.
23 I want to know whether it is something even feasibly the Court
24 could review if we get to that point. But I will of course
25 hear you out on your objections. And as you can tell, I'm

O4ACeis4

1 familiar with the issue and I am applying the appropriate
2 standard governing Rule 17 subpoenas.

3 MR. BURSHTeyN: Yes, your Honor. I'll say the number
4 of, per your order. It's 86.

5 THE COURT: And you have a folder with these documents
6 in there?

7 MR. BURSHTeyN: Yes, your Honor.

8 THE COURT: Understood.

9 MR. BURSHTeyN: If I may, your Honor. We produced
10 over 140 documents prior to the response deadline so that both
11 parties could have more time to review, even though after the
12 Court's order, we met and conferred and sent a letter to
13 defendant explaining that even with the Court's order, what we
14 produced is beyond what's called for. This idea that they've
15 narrowed, your Honor, actually shows that it's a fishing
16 expedition. Out of seven requests, they dropped six of them,
17 two after the Court denied the motion to quash, because your
18 Honor's clear that what they're doing is trying to get
19 discovery to, you know, what appears to be an attempt to
20 circumvent the state civil case.

21 This idea that this new narrowing of communications
22 regarding the attack and the settlement, it would be very
23 expected and reasonable that after an entity is attacked, that
24 it would seek the advice of legal counsel, your Honor, or in a
25 discussion about essentially a ransom negotiation, there would

O4ACeis4

1 also be communications with lawyers.

2 So, in our view, your Honor, the categories themselves
3 that they're seeking show that it's a fishing expedition and
4 make this very fraught inquiry into privilege. I can go in, I
5 don't want to belabor it now unless you'd like me to.

6 THE COURT: Let's hear from Mr. Greenspan.

7 MR. GREENSPAN: Your Honor, just addressing a couple
8 things there and then coming back to the Court's question. We
9 dropped two categories, those related to the pop-up and in
10 terms of service postdating the attack because we were able to
11 agree with the government on ways to get those in through the
12 documents we had not because they weren't relevant or exceeded
13 the scope.

14 As for the documents we've seen, and presumably the
15 documents that are withheld, they go to how Mango understood
16 the attack both in real time and shortly thereafter when they
17 understood things. These are discussions involving witnesses
18 in this case, including the witness on the stand, as well as
19 Mr. Durairaj, who we understand is going to be a witness coming
20 up and a central at that, and how they made decisions to react
21 and what they did.

22 So these go to the heart of the case --

23 THE COURT: So what you're saying is what's ramming is
24 not a fishing expedition, but is limited to the category of
25 documents and the inquiry that the government has itself

O4ACeis4

1 engaged in in measuring the expectations and whether things
2 would have mattered to contributors and users of Mango Markets
3 at or around the time in question; is that fair?

4 MR. GREENSPAN: Precisely. There's background
5 information --

6 THE COURT: Anything else?

7 MR. GREENSPAN: There's also information that goes
8 directly to materiality in terms of how it relates to the
9 elements of the case.

10 THE COURT: What was the specification that you
11 provided to Mango Labs that would narrow it to that particular
12 issue?

13 MR. GREENSPAN: You mean what was the text of the
14 request?

15 THE COURT: The expectations and understandings of
16 Mango Markets participants at or around the time of the
17 incident as to the nature of what occurred, which is, as I
18 understand it, a general summary of the category.

19 MR. GREENSPAN: Your Honor, we narrowed the timeframe
20 down to a very narrow timeframe, around October 11th, and it
21 was related specifically to conversations among these decision
22 makers at Mango DAO. So this was supposed to be narrow in
23 scope and narrow in substance to go to these things.

24 THE COURT: To the extent there are communications
25 with counsel, you're not seeking those?

O4ACeis4

1 MR. GREENSPAN: We're not seeking those. We're just
2 trying to understand if there were and make some evaluation.
3 We've really tried to be flexible in how to do that. We've
4 gotten really a refusal to engage from the other side.

5 THE COURT: So Mr. Burshteyn, I don't want to review
6 86 documents *in camera*, but are you able to go through those
7 documents to determine which ones are with counsel? And it may
8 be that there's only a small volume left. However, I do
9 believe that given how the request has been narrowed, it would
10 satisfy the Nixon standard because it goes to an issue that has
11 come up in this trial and has become a relevant issue and it is
12 only about that, it is not about anything else. And you tell
13 me if it's about something else and I'm missing something,
14 because if that's the case, then you may have a fair argument,
15 but if it's really only about this and really only a narrow
16 time slice around October 2022, then it would seem to be the
17 proper subject of a subpoena.

18 MR. BURSHTEYN: Thank you, your Honor.

19 So Mango Labs does not agree with how they
20 characterized their request. I can quote what they said, which
21 is documents and communications within your possession
22 regarding what you called "the exploit" and the reactions to
23 it. So it is any document regarding the exploit --

24 THE COURT: But what's the time period?

25 MR. BURSHTEYN: It's from October until December. So

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1 it's three months after where you would expect to see many
2 communications with counsel regarding the exploit.

3 Now, your Honor, if it's further narrowed to just the
4 expectations around the attack, many of that 86 number, I don't
5 know, many would be not even responsive to that. The way
6 they're characterizing it isn't what we understood or what they
7 said, I think, again, demonstrates why this is still a fishing
8 expedition.

9 THE COURT: Mr. Greenspan.

10 MR. GREENSPAN: I think the terms he just used, this
11 is about what they're characterizing as the exploit. These are
12 specific statements about the facts at issue here. And the
13 timeframe, three months is not so substantial. And the people
14 involved, the number of custodians we understand is relatively
15 limited. As far as the insinuation that keeps coming up over
16 and over again with really no foundation that this is about the
17 civil case, we've represented in writing to Mango Labs that we
18 won't use this in the civil case. We've told them we'd agree
19 to a protective order subject to getting the government to
20 agree, which hasn't happened. We keep hearing the same
21 arguments over and over again about some kind of improper use,
22 but it's not about that, it's about going to the heart of this
23 case. We intend to use these documents in this trial in the
24 coming days.

25 MR. BURSHTYEN: Your Honor, but there has to be some

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1 basis, some good-faith basis for why these documents that are
2 being withheld may not be privileged. And there's authority on
3 that. The Supreme Court has held that this type of a fishing
4 expedition --

5 THE COURT: Hold on. Hold on. Let's try to narrow
6 this down.

7 First of all, I don't believe that documents that
8 would have been in December would satisfy the Nixon standard.
9 So we're really talking about October and November. So let's
10 limit it in that way.

11 Second, if there are communications actually with
12 counsel, then I don't believe that there's grounds for
13 production. I can't imagine what those communications would
14 be, other than privileged communications pertaining to legal
15 advice regarding the exploit. So that's a further narrowing.

16 So what remains may be a small number of documents,
17 which you could just turn over to Mr. Greenspan, and then we'd
18 be done with this issue.

19 So, what I'll ask you to do, Mr. Burshteyn, in the
20 next few minutes, take a look at the documents and turn the
21 remaining documents over to Mr. Greenspan. If you believe that
22 some of the remaining documents still present a privilege issue
23 because they reflect attorney advice, then you can furnish just
24 those documents over to the Court for *in camera* review.

25 MR. BURSHTEYN: Your Honor, if I may just very

O4ACeis4

1 briefly. I can say now that there are three documents without
2 lawyers that have been withheld, and subject to our --

3 THE COURT: So then why are we here?

4 MR. BURSHTEYN: We can show them to the Court. We're
5 very concerned about showing them to defendant.

6 THE COURT: This is something that the parties could
7 have worked out --

8 MR. BURSHTEYN: We attempted, your Honor. Sorry this
9 has come to the Court.

10 THE COURT: Let's see those three documents.

11 MR. GREENSPAN: We had no idea they were three
12 documents. This really would have helped when we asked them
13 for that number.

14 MR. BURSHTEYN: May I approach, your Honor?

15 THE COURT: You may.

16 MR. BURSHTEYN: Your Honor, if you go to the last tab,
17 the very, very last tab of the binder.

18 THE COURT: Okay.

19 MR. BURSHTEYN: And then, your Honor, if you just go
20 to the tab right before that.

21 THE COURT: So now you've redacted these. Have the
22 redacted documents been produced?

23 MR. BURSHTEYN: Yes, your Honor. And so, I'm showing
24 you here what we've redacted.

25 THE COURT: Let me get this straight. We're talking

O4ACeis4

1 about three documents that have been produced, just not in
2 unredacted form?

3 MR. BURSHTEYN: Yes. Although, your Honor, if you
4 give me a minute, I believe that there's -- we may need to
5 doublecheck. There may be three others in the binder that I
6 need to pull out for you. I'll have to confirm which ones
7 those are.

8 THE COURT: Mr. Greenspan, is this dispute about these
9 three documents that have been produced, although, are in
10 redacted form.

11 MR. GREENSPAN: I didn't understand that. I had no
12 idea how many documents there were. If he's Mango Labs is
13 representing these are the only three documents that don't
14 involve lawyers --

15 MR. BURSHTEYN: I believe there's more, they're just
16 lumped with the others that are with attorneys. I need to pull
17 these out.

18 THE COURT: Can you pull these those three out and
19 we'll address them. This is not an urgent pressing issue, so
20 we'll address it --

21 MR. BURSHTEYN: At the next break, I can have them
22 ready for you.

23 THE COURT: And I'll give you this binder back.

24 MR. BURSHTEYN: Thank you, your Honor. I appreciate
25 the Court's attention.

O4ACeis4

1 MR. TALKIN: Your Honor, I have one more issue. We do
2 need the government here for it.

3 THE COURT: We'll pick it up before the jury comes
4 back.

5 MR. TALKIN: But it's with Mr. Burshteyn.

6 THE COURT: Are you going to be here?

7 MR. BURSHTEYN: Not going anywhere.

8 (Luncheon recess)

9 (Continued on next page)

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AFTERNOON SESSION

12:26 p.m.

(In open court; jury not present)

THE COURT: Mr. Talkin, I believe you had an issue to raise.

MR. TALKIN: Yes, your Honor. I spoke to -- I'm waiting on a response from the Mango people. It may not be an issue.

THE COURT: So we can proceed?

MR. TALKIN: Yes.

THE COURT: Mr. Hernandez, let's get the jury.

THE DEPUTY CLERK: Yes, your Honor.

MR. DAVIS: Should we recall the witness.

THE COURT: Yes.

MR. BURNETT: Did you want to address the 115, 116 issues now or we can break before we get there?

THE COURT: Let's address it now.

Had the parties had any discussions? Where are we?

MR. BURNETT: I still haven't seen a stipulation from the defense. They sent me two contracts now that they're asking to put into evidence.

THE COURT: Let's take it up at a break.

You can bring the witness in.

(Witness present)

(Continued on next page)

O4ACeis4

Shipe - Cross

1 (Jury present)

2 THE COURT: Please be seated.

3 Mr. Talkin, are you prepared to proceed?

4 MR. TALKIN: Yes. Thank you, your Honor.

5 CROSS-EXAMINATION

6 BY MR. TALKIN:

7 Q. Good afternoon, Mr. Shipe.

8 A. Good afternoon.

9 MR. TALKIN: I'll ask that we pull up Government
10 Exhibit 1011, please, first page.

11 Q. Can you see that?

12 A. Yes.

13 Q. You remember talking about this document a few minutes ago?

14 A. Correct.

15 Q. And that is basically, for lack of a better term, it's a
16 publication, it's what Mango Markets puts out so people
17 understand what goes on at Mango Markets?

18 A. The documentation, yeah.

19 MR. TALKIN: I would now like to turn to page 70 of
20 that document. At the very top, perpetual future markets, if
21 you could highlight that, please, or blow it up and the
22 paragraph below that.

23 Q. In here, you see it's talking about the perpetual future
24 markets and it describes them as permission lists; correct?

25 A. Correct.

O4ACeis4

Shipe - Cross

1 Q. And "permission lists" is a term that appears throughout a
2 large part of this document; isn't that correct?

3 A. I believe so.

4 Q. And "permission lists" means that anybody can use the
5 platform?

6 A. That's correct.

7 Q. And you do not need to provide an identification to get on
8 the platform?

9 A. That's correct.

10 Q. You don't have to provide an email?

11 A. That's correct.

12 Q. And you don't have to provide an address?

13 A. That's correct.

14 Q. No phone number?

15 A. That's also correct.

16 Q. And there's also two ways or at least two ways to get onto
17 the platform. One, you can go in through the website; correct?

18 A. Correct.

19 Q. And then you can also go in just directly to the
20 blockchain?

21 A. Yes.

22 Q. And when you go directly to the blockchain, obviously
23 there's no requirement for any type of the information we just
24 discussed?

25 A. That's correct.

O4ACeis4

Shipe - Cross

1 MR. TALKIN: If we can now go to page 110, highlight
2 "liquidations" and those bullet points. Thank you.

3 Q. So this talks about liquidations. You testified on direct
4 examination that liquidations occur -- I don't think you used
5 the term "maintenance health," but when they get under water, a
6 liquidation can occur; correct?

7 A. That's correct.

8 Q. And you have no control on whether or not you get
9 liquidated if you're eligible for liquidation?

10 A. If you're already eligible, correct.

11 Q. And there is an industry in liquidations where people use
12 what are called bots to do liquidations?

13 A. Bots?

14 Q. Yes. Programs.

15 A. Scripts.

16 Q. Scripts. But you've heard the term "bots" before?

17 A. Yeah, like Twitter bots, people posting scams and stuff.

18 Q. In this genre, you call them scripts, like computers that
19 execute liquidations?

20 A. That's right.

21 Q. Those happen pretty much instantaneously when someone -- or
22 they have the ability to instantaneously liquidate someone if
23 they fall below the proper health?

24 A. If they're eligible.

25 Q. So if someone's eligible, those bots can grab them right

O4ACeis4

Shipe - Cross

1 away and liquidate?

2 A. As long as liquidations are working on the platform.

3 Q. And that's pretty prevalent in Mango?

4 A. What's prevalent?

5 Q. The automatic liquidations, for lack of a better term.

6 A. Up until the exploit, yes.

7 Q. I'm only talking about up until that period of time, just
8 so we're clear.

9 A. What period of time?

10 Q. Up to what you call the exploit.

11 A. Got it.

12 Q. And again, liquidations are permissionless; right?

13 A. Correct.

14 Q. And the oracle price is used to determine the value of the
15 assets and the liabilities; is that also correct?

16 A. That's right.

17 Q. Before I go to the next page, if somebody is under water,
18 that means that their debt can be collected through
19 liquidation; isn't that correct?

20 A. I don't know what you mean by "collected."

21 Q. In other words, if someone has collateral on the platform
22 and they borrowed against it, that collateral can be taken if
23 you're below the proper health.

24 A. Right. Or some of the positions could be sold. I think it
25 works a couple different ways.

O4ACeis4

Shipe - Cross

1 Q. And the first way that is done is through liquidation;
2 correct?

3 A. Liquidations are the first step in that process, yeah.

4 Q. And the second step is the insurance fund; correct?

5 A. That's correct.

6 MR. TALKIN: If we can go to 111.

7 Q. And the insurance fund has \$70 million in it that is
8 available to cover any debt that is not satisfied through
9 liquidations; is that correct?

10 A. Well, the second step that you referred to of the insurance
11 fund, that there was one that was in Mango Markets V3. The
12 \$70 million is what's in the DAO, which is a second account.

13 Q. If you could read the jury what it says under "insurance
14 fund," please.

15 A. The Mango Markets program has a \$70 million DAO controlled
16 treasury for insurance on the three deposits. When there are
17 bankrupt accounts, the insurance fund will pay off losses
18 incurred by token lenders or PERP's contract participants.

19 Q. So what they're telling you is there is up to \$70 million
20 available to pay off losses?

21 A. That's right.

22 Q. The next step is something called socialized loss?

23 A. That's right.

24 MR. TALKIN: Can we go to 112. If we could just blow
25 up the whole page.

O4ACeis4

Shipe - Cross

1 Q. Socialized loss does not happen unless the entire insurance
2 fund is depleted; correct?

3 A. This was what I was touching on earlier. There was
4 \$1 million in a separate account that would be depleted first,
5 then there would be socialized losses. The actual V3 program
6 had some function -- I don't know exactly how our contract
7 worked, but it had a function for the \$1 million that would be
8 hit, then the socialized losses would occur, the other funds
9 were in the DAO, they would have to be moved in for an
10 automatic insurance fund to work, and then the socialized
11 losses.

12 Q. Correct. So there's another step, but those funds are
13 dedicated, meaning when I say "those funds," the funds in an
14 insurance fund -- it's called an insurance fund, right -- those
15 funds are dedicated to cover losses.

16 A. The DAO could vote to not move them over to cover it.

17 Q. If they do vote to move it over, they will cover it; right?

18 A. If it passes, yeah, it would.

19 Q. Everything I just described, that process of first going to
20 liquidation, then going to the insurance fund, then going to
21 socialized loss, that is controlled by a smart contract?

22 A. The \$1 million in the insurance fund part and the
23 socialized losses is controlled by a smart contract.

24 Q. As well as the liquidations, as well?

25 A. And the liquidations, yeah.

O4ACeis4

Shipe - Cross

1 MR. TALKIN: I now want to go to page 168 of the same
2 document.

3 Q. Before I get there, on the Mango protocol, USDC is used as
4 a median of exchange?

5 A. That's correct.

6 Q. And here, under "design," you'll see that when this was
7 written, they say, typically, USDT was used as the medium of
8 exchange; is that right?

9 A. Typically, USDT is what it says here.

10 Q. But it really doesn't matter which one because they both
11 being basically a dollar, a one dollar value; is that correct?

12 A. Yes.

13 Q. Direct examination, you said that this event that you
14 called the exploit, nothing like that had ever happened before.
15 Do you remember that testimony?

16 A. Yes.

17 Q. Do you remember that there was an incident on the platform
18 regarding the Cope coin?

19 A. Yes.

20 Q. And the Cope coin incident, and I wont get into details,
21 but I just want to make sure I'm right, what happened,
22 basically, somebody put on a coin that was not valuable in the
23 long run, borrowed against it, and then never came back; is
24 that right?

25 A. I don't know about the borrowed money against it and never

O4ACeis4

Shipe - Cross

1 came back. I believe all liquidations worked. The platform
2 never stopped working.

3 Q. Correct. The platform never stopped working, but somebody
4 put a coin onto the platform, Cope coin?

5 A. I don't know what coin they put on as their collateral.

6 Q. Cope coin was never their collateral?

7 A. I have no idea. I never looked at those accounts.

8 Q. But you know that there was an incident involving the Cope
9 coin?

10 A. The Cope coin went up in value very quickly, but I don't
11 know about the accounts in nickel markets.

12 MR. TALKIN: I want to go to Government Exhibit 1003.

13 Q. That is the first proposal that was put out for vote that
14 you talked about during direct examination; correct?

15 A. Correct.

16 Q. And that actually happened within is a few hours of the
17 original events of October 11th of 2023; correct?

18 A. I don't know the exact time.

19 Q. But it was pretty soon after?

20 A. I'd say within a few days, but yeah.

21 Q. Was it within a few hours?

22 A. I don't know.

23 Q. When the process of what happens here is, it's put on the
24 DAO site and everyone publicly is allowed to do that. When I
25 say "everyone," I don't mean just Mango holders, anybody can

O4ACeis4

Shipe - Cross

1 look at that; correct?

2 A. That's correct.

3 Q. This information was put out to the public before there was
4 any agreement whatsoever?

5 A. Yes.

6 Q. At that point in time, and I don't want you to say what
7 people said, but there was discussion about among Mango holders
8 about whether or not to accept this repaid bad debt proposal?

9 MR. DAVIS: Objection.

10 THE COURT: Overruled.

11 A. There was discussion on Discord about the proposal.

12 Q. And Discord is a program where people, a large group of
13 people can chat together?

14 A. Yeah, it's a the chat platform.

15 Q. And there's actually a Mango Discord who allows people
16 involved in Mango to chat?

17 A. Right.

18 Q. Also if you're not on Mango, you can get on that platform,
19 as well?

20 A. That's right.

21 Q. There was discussion, and again, I'm not asking for what
22 the discussion was, but there was discussion among different
23 people whether to accept or reject this proposal?

24 A. Yeah. Lots of people were analyzing it.

25 Q. And ultimately, you personally decided to reject the

O4ACeis4

Shipe - Cross

1 proposal?

2 A. I did not reject it, I abstained.

3 Q. You did not vote for it?

4 A. I did not vote on it at all.

5 MR. TALKIN: If we go to government's 901.

6 Q. That's the second proposal that ultimately passed; correct?

7 A. Correct.

8 Q. That one you did not vote for, did you abstain or vote
9 against it?

10 A. I abstained.

11 Q. And the reason you abstained was because you didn't want to
12 give up any of your claims or you weren't ready to give up any
13 of your claims?

14 A. I didn't even know what that meant, to give up my claims.

15 Q. And because of the fact that you didn't vote on it, you did
16 not give up any of your claims, did you?

17 A. I still don't really know what that means.

18 Q. But nothing in this bad debt 2 -- well, bad debt 2
19 ultimately passed?

20 A. That's correct.

21 Q. After bad debt 2 passed, nothing in there kept you from
22 having the ability to sue Mr. Eisenberg, did it?

23 A. I don't know.

24 Q. Nothing in there kept you from being able to go to law
25 enforcement authorities?

O4ACeis4

Shipe - Cross

1 A. I still don't know what -- if this statement is legal or
2 voting on it, what it means.

3 Q. Did you believe that this repaid bad debt 2, that passed,
4 was binding on you?

5 MR. DAVIS: Asked and answered.

6 THE COURT: It's overruled.

7 A. I had no clue, which is why I abstained.

8 Q. Did you ultimately get your money back?

9 A. Yes.

10 Q. And that was able to be done by the approval of bad debt
11 No. 2, that was approved?

12 A. That combined with the DAO funds that were added to it.

13 Q. Right. So the \$67 million that came back from
14 Mr. Eisenberg as well as the DAO fund is what made all of the
15 token holders whole?

16 A. That's correct.

17 Q. You stated that -- I'm going back to October 11th -- sometime
18 right before when the bad debt 1 was put through, you stated
19 that the protocol or Mango Markets stopped working?

20 A. That's right.

21 Q. And it stopped working because a program, a smart contract
22 had been written to pause the program?

23 A. It stopped working because all funds were withdrawn from
24 the platform, and therefore, liquidations wouldn't work.

25 Q. Are you aware whether or not code was written shortly after

04ACeIs4

Shipe - Cross

1 the events to pause the protocol?

2 A. I am aware.

3 Q. And how long after the events was that?

4 A. I do not know.

5 Q. Was it a matter of hours?

6 A. I don't know.

7 Q. Who wrote that code?

8 A. I would be guessing between a few people, but I don't know
9 exactly who did it. It wasn't me.

10 Q. It was done on behalf of the DAO, whoever did it?

11 A. Anybody can write code for the smart contract and propose
12 it. So it's always on behalf of the DAO, I guess is the
13 answer.

14 MR. TALKIN: Can we look at Government Exhibit 915,
15 please.

16 Q. Again, this is a public document?

17 A. Are you asking me?

18 Q. Yes. Is it a public document?

19 A. Yes.

20 Q. Is it available for anybody to see that goes on a website?

21 A. Yes.

22 Q. This shows a certain wallet putting \$5 million onto Mango
23 Markets?

24 A. That's correct.

25 MR. TALKIN: If we could look at 919, as well. Wait,

O4ACeis4

Shipe - Cross

1 before we go anywhere, I'm sorry.

2 Q. Looking at 915, at the top, you see Patriarch, Glossy,
3 Monohar. Do you see that?

4 A. Yes.

5 Q. Those are just random names that are put up there and they
6 are created by the platform; isn't that right?

7 A. You can either give these names, and if you don't give a
8 name, then a random name is generated for you.

9 Q. Would you agree with me that this appears to be a random
10 name?

11 A. This appears to be a random name, yes.

12 Q. So now let's go to 919. Looking at 919, just to pick up
13 where we left off, there's another name there. That looks like
14 a random name, as well; right?

15 A. It does to me, yes.

16 Q. And we also have about \$5 million put in?

17 A. Correct.

18 "Q. That represents, as with 915, somebody taking their own
19 USDC and putting it onto the Mango platform?

20 A. Right.

21 MR. TALKIN: Now if we could take a look at government
22 demonstrative, and I think I need the government, I don't know
23 if we have it, 1824.

24 Q. This is a public document, as well; is that correct?

25 A. Yes.

O4ACeis4

Shipe - Cross

1 Q. And on the upper right-hand corner, that's something called
2 an order book; isn't that correct?

3 A. That's correct.

4 Q. And that is specifically on this page, the order book for
5 Mango perpetuals?

6 A. That's correct.

7 Q. Was the Mango perpetual order book held always on the Mango
8 website?

9 A. It's in the Mango smart contract.

10 Q. And then the data from it displays on the Mango with
11 website?

12 A. It does.

13 Q. And that's a public document that anyone can see?

14 A. Yes.

15 MR. TALKIN: Can we look at Government Exhibit 917,
16 please.

17 Q. This was the withdrawals from the, we'll call it the long
18 account that you talked about during direct examination; is
19 that correct?

20 A. That's correct.

21 Q. And "withdrawal" doesn't necessarily mean "borrow," does
22 it?

23 A. That's correct.

24 Q. If an individual places their own funds onto Mango, they're
25 allowed to withdraw them or get them back by withdrawal; is

O4ACeis4

Shipe - Cross

1 that correct?

2 A. That's correct.

3 Q. And it's also true, isn't it, that if someone has profits
4 from a transaction that are on the Mango Markets platform, they
5 can take those profits out through a withdrawal?

6 A. That's correct.

7 Q. So if I put \$5 million onto the Mango Markets and I pull it
8 out, that is not a borrow, is it?

9 A. If you put it on and you pull it out and that's all you're
10 doing, no, that's not a borrow.

11 Q. I'm going to show you a document, which is marked DX 20.

12 MR. TALKIN: Please show the witness only.

13 Q. While we're waiting for that, as far as the withdrawals
14 that we see here, that's permitted by the smart contract?

15 A. Withdrawing is permitted by the smart contract.

16 Q. It's actually governed by the smart contract?

17 A. I don't know what "governed" means. Permitted.

18 Q. The smart contract is what makes the determination of
19 whether something can be withdrawn or not?

20 A. That's correct.

21 Q. And that's based on math, on formulas?

22 A. Yes.

23 Q. It's not based on anything else?

24 A. It's based on the code.

25 Q. And the code is just mathematical formulas?

O4ACeis4

Shipe - Cross

1 A. Correct.

2 Q. So when an individual goes to withdraw their coins, there
3 is no even contemplation about where those coins came from?

4 MR. DAVIS: Objection.

5 THE COURT: Overruled.

6 A. What do you mean by where they came from? Like, where they
7 were deposited?

8 Q. Right, where they were deposited from.

9 A. That would have been deposited from a wallet. I'm not sure
10 what you mean. Can you ask the question again.

11 Q. Let me ask you this: There is no issue or question about
12 what you're going to do with those coins when you take them
13 out?

14 A. That's correct.

15 Q. Because that is something that has nothing to do with the
16 smart contract?

17 A. What you do with them after, the smart contract wouldn't
18 know.

19 Q. Because the smart contract is programmed to do particular
20 jobs?

21 A. It has its own set of checks and balances.

22 Q. And those checks and balances, every time a transaction is
23 run on Mango Markets, those checks and balances, that
24 transaction goes through those checks and balances before the
25 smart contract approves it?

O4ACeis4

Shipe - Cross

1 A. That's correct.

2 Q. That's whether it's a deposit; correct?

3 A. Correct.

4 Q. Whether it's a withdrawal?

5 A. Correct.

6 Q. Whether it's a borrow?

7 A. Correct.

8 Q. Whether it's a trade?

9 A. That's right.

10 Q. It's automatic; correct?

11 A. Smart contract operates automatically, yeah.

12 Q. That's what they're designed to do; isn't that correct?

13 A. Yeah.

14 MR. TALKIN: I want to go DX 20.

15 Q. This is a --

16 A. Is this in evidence?

17 Q. No.

18 You recognize what this is?

19 A. Yes.

20 Q. What is it?

21 A. This is the withdrawal modal on the Mango Markets website.

22 Q. It's two pages --

23 MR. TALKIN: If you could show the second page to the
24 witness.

25 Q. Do you see the second page?

O4ACeIs4

Shipe - Cross

1 A. Yes.

2 Q. That's another withdrawal. What did you call it, modem?

3 A. Modal.

4 Q. That's a separate withdrawal modal?

5 A. It's like the second step, I believe, after the first one
6 that we saw.

7 Q. So let's go back to the first step.

8 MR. TALKIN: Your Honor, I'll offer DX 20 at this
9 time.

10 THE COURT: Any objection?

11 MR. DAVIS: No, your Honor.

12 THE COURT: It will be admitted.

13 (Defendant's Exhibit 20 received in evidence)

14 MR. TALKIN: Could we now please display it for the
15 jury.

16 Q. And this seems to be some type of example, right, just
17 looking at it?

18 A. Yeah. I don't know what you mean by "example." I guess
19 this is somebody's screenshot.

20 Q. You see here someone is preparing to withdraw funds?

21 A. That's right.

22 Q. Now, you'll notice --

23 MR. TALKIN: If we could highlight the line with the
24 "toggle" and "borrow funds" right underneath.

25 Q. When that is not clicked or toggled, if you hit "next"

04ACeis4

Shipe - Cross

1 here, you can only withdraw BTC, you cannot borrow it; is that
2 correct?

3 A. That's correct.

4 MR. TALKIN: Now let's go down to the next page.

5 Q. So here, we see that in our test, that the "borrow funds"
6 toggle is clicked. You see that; right?

7 A. Yes.

8 Q. And then you see down at the bottom, there's kind of a note
9 that tells you what happened there. Do you see that?

10 A. Yes.

11 Q. It says that, it confirms the withdrawal, which is just
12 telling the user that your withdrawal went through; is that
13 right?

14 A. That's right.

15 Q. And isn't it true that here, it says your withdrawal went
16 through and you received .002003 Bitcoin?

17 A. It doesn't say your withdrawal went through. It says
18 you're about to withdraw.

19 Q. I'm sorry. You're about to withdraw. So it gives you a
20 heads up of what's about to happen?

21 A. That's right.

22 Q. And then below that, it informs you that this withdrawal
23 includes a borrow of - and I won't say the number - some lesser
24 number?

25 A. Right.

04ACeIs4

Shipe - Cross

1 Q. In other words, when an individual who's doing this hits
2 the withdrawal button, part of that withdrawal is going to be a
3 straight withdrawal of funds of BTC?

4 A. Right.

5 Q. And the other part is going to be a borrow of BTC, a
6 certain amount of BTC?

7 A. That's right.

8 Q. So by hitting that one button, an individual is able to do
9 two transactions?

10 A. I don't know if it's two transactions.

11 Q. It's a withdrawal from two separate sources?

12 A. I don't know if that's correct either.

13 Q. Well, if you're borrowing -- I'm going to have to use the
14 number now. If you're borrowing .001903 BTC, that doesn't make
15 all of the .002003 BTC, does it?

16 A. That's right.

17 Q. That amount of BTC is not being borrowed?

18 A. That's right.

19 Q. It's either a withdrawal of your own funds; correct? It
20 could be a withdrawal of your own funds; is that right?

21 A. Right.

22 Q. Or it could be the withdrawal of some profits you have on
23 the website?

24 A. That's right.

25 Q. And the portion that's either profit or your own funds is

O4ACeis4

Shipe - Cross

1 not a borrow; is that right?

2 A. That's right.

3 Q. Going back to the time of the first proposal, I know you
4 don't know exactly when it was, but you knew it was within a
5 few hours of the incident; right?

6 MR. DAVIS: Objection.

7 THE COURT: Sustained. I think you might need to just
8 re-ask the question.

9 Q. You know it was sometime shortly after what you call the
10 exploit?

11 A. That's correct.

12 Q. By that time, were you aware that Mr. Eisenberg was the
13 person that had made these trades?

14 A. I don't believe so.

15 Q. You learned that Mr. Eisenberg was the person who made
16 those trades from an article written by an individual named
17 Carl Stack; is that right?

18 A. That's right.

19 Q. And Carl Stack is a blogger who writes on cryptocurrency,
20 among other things, cryptocurrency issues?

21 A. I guess so, yeah.

22 Q. And that article came out very shortly after the exploit;
23 is that right? To your memory.

24 A. Yeah, at least within a few days.

25 Q. Was it within a few hours?

O4ACeis4

Shipe - Cross

1 A. I don't think so.

2 Q. I don't want you to tell me what was being said on the
3 Mango Markets specifically, and when I say the Mango Markets, I
4 mean the Discord, but after the events, there was certainly a
5 lot of chatter on the Discord channel immediately after it
6 happened?

7 A. Right.

8 Q. And you were involved in some of that, I'm not saying you
9 said any, but you looked at it, you saw that you were involved?

10 A. That's right.

11 Q. And there were a ton of people involved?

12 A. Yeah.

13 Q. And I don't want to hear what anybody's views are, but
14 people were expressing their views?

15 A. Yeah.

16 Q. And there came a later time when they started on that
17 Discord discussing the various votes that had been proposed by
18 the DAO?

19 A. Yes.

20 Q. And when we talked about the spirited debate, that happened
21 mostly on the Mango Discord?

22 A. The Discord, yeah.

23 Q. Can you just tell the jury what Discord is, so they
24 understand.

25 A. It's an online chat platform.

O4ACeis4

Shipe - Cross

1 Q. And it's a very popular one?

2 A. Yes. Like Slack, Teams.

3 (Continued on next page)

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O4AVEIS5

Shipe - Cross

1 BY MR. TALKIN:

2 Q. You testified on direct examination about terms of service
3 and Version 3. I believe you said there was no terms of
4 service for Version 3?

5 A. That's correct.

6 Q. But on Version 4 there were terms of service?

7 A. Yes.

8 Q. And you were still around when the terms of service -- when
9 I say "still around," you were still involved with Mango when
10 the terms of service for Version 4 were implemented?

11 A. I was.

12 Q. I'm going to ask that you be shown -- and just you be shown
13 -- Government's Exhibit 2 -- excuse me, Defense Exhibit 2.

14 Do you recognize that?

15 A. Yes.

16 Q. And do you want us to leaf through that for you or do you
17 know what it is?

18 A. Terms of use for Mango Markets.

19 Q. And just, is that the terms of market for Mango Markets
20 that was implemented with Version 4?

21 A. It looks like it.

22 Q. And Version 4 was implemented after October of 2022?

23 A. That's correct.

24 Q. Do you remember when it was implemented?

25 A. No, but there is a last updated date here.

O4AVEIS5

Shipe - Cross

1 Q. That's an update date that doesn't tell us exactly when it
2 was implemented, does it?

3 A. No.

4 MR. TALKIN: Your Honor, I'll offer Defendant's
5 Exhibit 2 for evidence.

6 THE COURT: Any objection?

7 MR. DAVIS: No, your Honor.

8 THE COURT: Defendant's Exhibit 2 will be admitted.

9 (Defendant's Exhibit 2 received in evidence)

10 Q. And Defendant's Exhibit 2, Version 4 is the first time that
11 Mango Markets ever had a terms of use or --

12 A. Terms of use; correct.

13 Q. Terms of use is basically terms of service, is that the
14 same thing?

15 A. I think so. I think it's a legal thing. I don't know.

16 Q. On a Mango perpetual trade that happens on the Mango
17 platform, that is also controlled by a smart contract; is that
18 correct?

19 A. A Mango perpetual on Mango Markets, yes.

20 Q. And there is no rule in the smart contract that prevents
21 the same individual from being on both the long and the short
22 side of a perpetual contract?

23 A. Smart contract wouldn't know.

24 Q. A smart contract wouldn't know who was on either side of
25 the transaction, right?

O4AVEIS5

Shipe - Cross

1 A. That's correct.

2 Q. And because of that, it doesn't have the ability to
3 prohibit that; correct?

4 A. Wouldn't know, right.

5 Q. It really wouldn't -- as much as computer code can care, it
6 wouldn't care either, right?

7 MR. DAVIS: Objection.

8 THE COURT: Sustained. You can rephrase.

9 Q. It wouldn't know that -- it wouldn't matter to it as far as
10 executing its duties; correct?

11 A. There's no way for it to know.

12 Q. And the person that wrote it, wrote the code, wrote the
13 codes -- there's no way for it to know because the person that
14 wrote the code of the smart contract made it so that there's no
15 way for it to know?

16 MR. DAVIS: Objection.

17 THE COURT: That's sustained.

18 Q. Certainly the smart contract didn't -- before it executed,
19 doesn't ask for information about who's on the trades; correct?

20 A. That's correct.

21 Q. So it really doesn't even know to ask who's on the trades?

22 A. I don't even know what it means to know to ask --

23 Q. It's not programmed --

24 A. -- on the blockchain.

25 Q. It's not programmed to ascertain who's on the trade?

O4AVEIS5

Shipe - Cross

1 A. It doesn't make sense in the concept of smart contracts and
2 blockchain.

3 Q. I want to go to --

4 MR. TALKIN: One second, your Honor.

5 Can we put up Government Demonstrative 1824 again.

6 Thank you.

7 Q. So looking at the order book on the right side, those
8 are -- on the left side you have the longs, on the right side
9 you have the shorts; is that correct?

10 A. You have bids on the left and asks on the right.

11 Q. And the bids are the long, and the asks are the short?

12 A. That's right. If the bid is matched, then they would be
13 long. If they are on the book, they haven't been matched yet.

14 Q. And after they're on the book, they stay there until the
15 match happens, right?

16 A. Or until you cancel it.

17 Q. So if someone makes -- puts something on an order book and
18 changes their mind, they have an opportunity to pull it back by
19 canceling?

20 A. Or editing, yeah.

21 Q. Editing by changing the amount?

22 A. The amount or the price.

23 MR. TALKIN: Can we go back to 916 for a second.

24 Government Exhibit 916.

25 Q. On 916, the price for the Mango perps ranged somewhere

O4AVEIS5

Shipe - Cross

1 around .0 -- in the range of .03, give or take; correct?

2 A. It's the same, not a range. So .0382 for all of them.

3 Q. And if we go to 926, they're identical and they're pretty
4 much in range with the .038. It's off by 0002, right?

5 A. .0382 for all three of these as well.

6 Q. And that price is pretty much in line with the price for
7 perpetuals throughout on Mango that day, right?

8 A. I don't know what the price changes were that day.

9 Q. But that .0382 around October of '22, that's not an unusual
10 price?

11 A. It looks similar to what we saw on the previous exhibit in
12 that order book.

13 Q. Certainly seeing that price didn't -- if you were looking
14 at that and examining perpetual contracts, that wouldn't raise
15 your eyebrow, that wouldn't make you have any concern, right?

16 A. If that matched up with the prices on that day, then no.

17 Q. When you said that you worked for Mango -- you contributed,
18 I guess is a better word. You were compensated for that
19 through Mango token coins; is that correct?

20 A. That's correct.

21 Q. And you got a large number of them?

22 A. That's correct.

23 Q. How many was that?

24 A. 100 million MNGO.

25 Q. 100 million MNGO.

O4AVEIS5

Shipe - Cross

1 And you were hoping that those would turn into
2 something valuable some day, right?

3 A. That would be nice. Didn't know if it would happen.

4 Q. It would have made your work very worthwhile; correct?

5 A. Yeah, that's right.

6 Q. And you're not the only one that was given tokens; there
7 was a large group of people, a lot of them in the DAO that were
8 given a large number of tokens; isn't that right?

9 A. That's correct.

10 Q. And it would have been very nice for all of them also if
11 the Mango token had gone up in value?

12 A. I think so.

13 Q. And once that -- and eventually, there was an initial coin
14 offering, for lack of a better term, or a coin sale of the
15 Mango token?

16 A. Yes.

17 Q. And during that time, the Mango token raised a large amount
18 of money; isn't that right?

19 A. The insurance fund, the DAO.

20 Q. And that was about \$70 million?

21 A. That's right.

22 Q. So that affected the value of your Mango token, didn't it?

23 A. Depends, right. It's based on the market price.

24 Q. Correct. But the market price around the ICO went up to
25 almost 14 cents?

O4AVEIS5

Shipe - Cross

1 A. That's right.

2 Q. And maybe a little higher sometimes?

3 A. That's right.

4 Q. Did it go up to 40 cents?

5 A. I think it went up to a peak of 90 cents.

6 Q. 90 cents.

7 So at the time it went up to a peak of 90 cents, you
8 had a lot of money, at least in the tokens that you owned were
9 worth a lot of money?

10 A. Not really. Because I couldn't have sold them then. The
11 90 cents only lasted a few seconds when the coin price was
12 inflated.

13 Q. And then when the -- going back to when the -- around the
14 time of the ICO, when the Mango token went up much higher then
15 as well; correct?

16 A. Much higher than 90 cents?

17 Q. Much higher than 14 cents.

18 A. It did go up from there, yeah.

19 Q. And that was not a blip; that actually had some staying
20 power that increased price?

21 A. Right.

22 Q. And so timing wouldn't have prevented you from selling
23 during that period of time?

24 A. No.

25 Q. And so at that point in time, you had some value, some

O4AVEIS5

Shipe - Redirect

1 serious value in the Mango tokens that you possessed?

2 A. Not really. Because I couldn't have sold them all. There
3 was not enough liquidity.

4 Q. You could have sold some?

5 A. Some, yeah.

6 MR. TALKIN: May I have one second, your Honor?

7 THE COURT: You may.

8 MR. TALKIN: Thank you. I have no further questions.

9 THE COURT: Mr. Davis, redirect?

10 MR. DAVIS: Thank you, your Honor.

11 REDIRECT EXAMINATION

12 BY MR. DAVIS:

13 Q. All right, Mr. Shipe.

14 MR. DAVIS: Can we start by pulling up government
15 exhibits. Let's start with Government Exhibit 914.

16 Q. All right, Mr. Shipe. Do you remember looking at this on
17 cross-examination?

18 A. Yes.

19 Q. And this is the long side account, right?

20 A. Yes.

21 Q. You remember on cross-examination being asked about the
22 difference between withdrawals and borrows?

23 A. Yes.

24 MR. DAVIS: All right. Can we look at this account
25 and look under account balances.

O4AVEIS5

Shipe - Redirect

1 Q. What is listed under borrows for USDC?

2 A. \$54,441,450.70.

3 Q. What's listed under borrows for MSOL?

4 A. 768,635.92.

5 Q. What's listed for borrows under SOL?

6 A. 761,782 point 908.

7 Q. For each and every one of these cryptocurrencies,
8 afterwards are there values under borrows?

9 A. Yes.

10 MR. DAVIS: All right. Can we now turn to 918,
11 please.

12 Q. And this is the short side account?

13 A. Yes.

14 Q. And here, what's listed under borrows for the Mango token?

15 A. 17 million, approximately.

16 MR. DAVIS: Can we pop out of that, please.

17 Q. And for the cryptocurrencies under the Mango account, are
18 they listed under borrows?

19 A. Yes.

20 Q. You remember being asked about how users appear on the
21 smart contract? About how users' ID would appear on a smart
22 contract on cross-examination?

23 A. Yeah.

24 Q. These two accounts, would they appear as different users on
25 the smart contract?

O4AVEIS5

Shipe - Redirect

1 A. Yes.

2 Q. Would they have different user names?

3 A. Different account names.

4 Q. Would they have different account balances?

5 A. Yes.

6 Q. Would they have different collateral?

7 A. Yes.

8 Q. Would they make different trades?

9 A. Yes.

10 Q. Would they have different deposit amounts?

11 A. Yes.

12 Q. Because they would appear as two different accounts;
13 correct?

14 A. That's correct.

15 Q. Are you familiar how -- you were asked about pricing. Are
16 you familiar with how Jupiter Aggregator works on Mango
17 Markets?

18 A. Yes.

19 Q. What is Jupiter Aggregator?

20 A. Jupiter Aggregator, it's another tool or platform on
21 Solana.

22 MR. TALKIN: Objection, your Honor.

23 THE COURT: Let's do sidebar.

24 (Continued on next page)

O4AVEIS5

Shipe - Redirect

1 (At sidebar)

2 THE COURT: Okay. Grounds.

3 MR. TALKIN: Way beyond the scope of
4 cross-examination.

5 THE COURT: If that's the only objection, I'm going to
6 overrule the objection.

7 MR. DAVIS: Thank you, your Honor.

8 (Continued on next page)

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O4AVEIS5

Shipe - Redirect

1 (In open court)

2 BY MR. DAVIS:

3 Q. What is Jupiter Aggregator?

4 A. It's another platform on Solana that brings together a
5 bunch of different exchanges that helps to find the best price.

6 Q. Are you able to access Jupiter Aggregator from Mango
7 Markets?

8 A. Yes.

9 Q. What can you do through Mango Markets on Jupiter
10 Aggregator?

11 A. You can select a token that you currently have that you
12 want to swap from into another token that you want to swap to.

13 Q. Before you make a trade on this Jupiter Aggregator
14 application on Mango Markets, does it warn you about the
15 impact, the price impact of your trade?

16 A. Yes, it does.

17 Q. How does it do that?

18 A. It lists there the percentage of the price impact.

19 Q. So if you were to make a trade through Jupiter Aggregator
20 on Mango Markets, you would see the price impact of your trade;
21 is that right?

22 A. That's right.

23 Q. You were asked about terms of service, do you remember
24 that?

25 A. Yes.

O4AVEIS5

Shipe - Redirect

1 Q. And you were asked that you -- you testified on
2 cross-examination there were terms of service for V4, remember
3 that?

4 A. Yes.

5 Q. And there were not terms service for V3, do you remember
6 that?

7 A. Yes.

8 Q. Does the fact that there was no terms of service on V3 mean
9 that anything was allowed on the platform?

10 MR. TALKIN: Objection.

11 THE COURT: That's sustained.

12 MR. DAVIS: Can we go to Government Exhibit 1011,
13 please. And we can turn to page 126.

14 Q. What is Government Exhibit 1011?

15 A. This is a frequently asked questions or FAQ.

16 Q. And do you see the frequently asked question that reads:
17 "What prevents someone from borrowing funds, withdrawing, and
18 run away with it?"?

19 A. Yes.

20 Q. Why was it important that someone cannot borrow funds,
21 withdraw, and run away with it?

22 MR. TALKIN: Objection.

23 THE COURT: That's sustained.

24 Q. You were asked on cross-examination about liquidations, do
25 you remember that?

O4AVEIS5

Shipe - Recross

1 A. Yes.

2 Q. And you went through the liquidation process?

3 A. Yes.

4 Q. Did liquidation work on October 11th, 2022?

5 A. No.

6 Q. Why did liquidation not work on October 11th, 2022?

7 A. Because all the funds were withdrawn from the platform.

8 MR. DAVIS: No further questions, your Honor.

9 THE COURT: Thank you very much.

10 Mr. Talkin, anything further?

11 MR. TALKIN: Can we have Exhibit 918, please.

12 RECROSS EXAMINATION

13 BY MR. TALKIN:

14 Q. On this document, there's no column for withdrawals, is
15 there?

16 A. No column in the table balances, right.

17 Q. And there's no column for unwithdrawn profits?

18 A. Unwithdrawn profits. Like the unrealized P&L column? I'm
19 not sure what you mean by "unwithdrawn profits." Sorry.

20 Q. Well, let's go through it.

21 You see the borrows column, right?

22 A. Yes.

23 Q. And you see a zero there?

24 A. For USDC?

25 Q. Correct.

O4AVEIS5

Hermida - Direct

1 A. Yes.

2 Q. Why does that say zero at that point in time?

3 A. Because instead of borrows, there were deposits for USDC.

4 Q. And if there were a withdrawal, where would that withdrawal
5 be reflected in this chart?

6 A. The withdrawals would show under the history tab up above.

7 Q. So that would be a totally different document?

8 A. Yes.

9 Q. So the document you're being shown doesn't even have a
10 chance to show you withdrawals?

11 A. That's correct.

12 MR. TALKIN: Nothing further. Thank you.

13 THE COURT: Thank you very much, Mr. Shipe.

14 You're free to leave the stand.

15 (Witness excused)

16 THE COURT: You can leave the materials there.

17 You can take the water.

18 THE WITNESS: Awesome. Thank you.

19 THE COURT: The government may call its next witness.

20 MR. BURNETT: The government calls Chris Hermida.

21 CHRISTOPHER HERMIDA,

22 called as a witness by the Government,

23 having been duly sworn, testified as follows:

24 DIRECT EXAMINATION

25 BY MR. BURNETT:

O4AVEIS5

Hermida - Direct

1 Q. All right. Good afternoon, Mr. Hermida.

2 A. Good afternoon.

3 Q. Where do you currently work?

4 A. Switchboard Technology Labs, Inc.

5 Q. What's your job there?

6 A. I'm the co-founder and CEO.

7 Q. And how long have you been with Switchboard?

8 A. Since our cofounding approximately three years ago.

9 Q. What are some of your responsibilities as the co-founder
10 and CEO of Switchboard?

11 A. Mostly responsible for external functions, so things like
12 business development, marketing, partnerships, strategy, etc.,
13 etc.

14 Q. We'll get into some details in a minute, but first, at a
15 very high level, what does Switchboard do?

16 A. Sure. So Switchboard Technology Labs, Inc. provides
17 research and development, consulting, and infrastructure
18 services for Web3 applications and companies.

19 One of the things that Switchboard Technology Labs,
20 Inc. also does is they are a core contributor and developer to
21 the Switchboard protocol. The Switchboard protocol is a
22 customizable oracle network with the goal of making it easy for
23 Web3 applications to access external data.

24 Q. Now, you mention it's an oracle network for Web3
25 applications. What does "Web3" mean?

O4AVEIS5

Hermida - Direct

1 A. It's a generally catchall term to include distributed
2 computing, blockchain-based and crypto-based companies or
3 applications.

4 Q. Are you familiar with an entity called Mango Markets?

5 A. Yes.

6 Q. How are you familiar with it?

7 A. They are a user of the Switchboard protocol network.

8 Q. Did Mango Markets use Switchboard's oracle services back in
9 October 2022?

10 A. Yes.

11 Q. All right. So we'll put a pin in that for just a minute
12 and come back to it.

13 I'd like to start by showing you - and first just for
14 the witness and the parties - what's been marked for
15 identification as Government Exhibit 870.

16 Do you recognize this?

17 A. Yes.

18 Q. Just at a high level first, what is it?

19 A. That is the home page of the Switchboard website.

20 MR. BURNETT: The government offers 870.

21 MR. GREENSPAN: No objection.

22 THE COURT: GX-870 will be admitted.

23 (Government's Exhibit 870 received in evidence)

24 MR. BURNETT: All right.

25 If you could publish this for the jury, please.

O4AVEIS5

Hermida - Direct

1 Q. All right. What are we looking at here?

2 A. This is our home page -- or at the time -- which describes
3 the Switchboard network and has links to our Goody graphical
4 user interfaces for the -- our explorer and our feed builder
5 tool.

6 Q. Can you read the sentence with "plug in with Switchboard"?

7 A. Yes. "Super charge your Web3 application with custom data
8 feeds, functions, and verifiable randomness all plugged in by
9 Switchboard oracles."

10 Q. What are some examples of Web3 applications that use
11 Switchboard's oracle services?

12 A. Sure. So two common examples are decentralized derivatives
13 platforms and decentralized lending protocols.

14 Q. And when you say decentralized derivatives platforms or
15 lending protocols, are there sort of more common terms for
16 those?

17 A. DeFi protocols would be the general catchall.

18 Q. Now, the rest of the sentence here refers to custom data
19 feeds and Switchboard oracles. What does that mean?

20 A. So in the custom data feed context, it basically means
21 price feeds -- at least for those derivatives and lending
22 protocols mentioned -- that are used for a variety of reasons,
23 but most often either to determine the funding rates or
24 liquidation prices.

25 Q. All right. So in the context of something like a

O4AVEIS5

Hermida - Direct

1 cryptocurrency exchange, what are some things that a
2 Switchboard oracle is typically used for?

3 A. Again, so in the context of, say, a decentralized
4 derivatives exchange, it's used for determining, say, the
5 funding rate, and probably the more common example, the
6 liquidation price. So when a position would be liquidated,
7 when it's off sides per the value of the collateral.

8 MR. BURNETT: All right. So we can take this down.

9 Q. And I want to drill down a little bit on how these
10 cryptocurrency oracles work.

11 At a high level, what sources of information do
12 oracles draw from when they are setting an oracle price for
13 cryptocurrency?

14 A. Sure. So typically, oracles rely on external sources to
15 get that information, because Web3 applications typically by
16 themselves are unable to access the six journal data.

17 Q. What are some types of external sources that those oracles
18 look at?

19 A. Sure. In the context of price feeds, it's typically where
20 price discovery and where prices are -- or trading activity is
21 occurring in order to be able to create an index for those said
22 prices.

23 Q. What types of places does that price discovery typically
24 happen on?

25 A. Typically, centralized cryptocurrency exchanges; and in

O4AVEIS5

Hermida - Direct

1 some cases, decentralized cryptocurrency exchanges.

2 Q. Broadly speaking again, we'll get to specifics in a minute,
3 what does an oracle do with price information that it gathers
4 from other sources, like centralized cryptocurrency exchanges?

5 A. Sure. So typically, it computes an index that is then
6 relayed on-chain for use by these applications. And again, as
7 mentioned previously, there are multiple use cases; but one of
8 the most common is for determining liquidation prices.

9 Q. Now, does Switchboard have terms of use that apply for the
10 use of Switchboard's services and website?

11 A. Correct. Yes.

12 Q. Did it have terms of use back in October of 2022?

13 A. I believe so, yes.

14 Q. I'm showing you what's been marked as Government Exhibit
15 872. Do you recognize this?

16 A. Yes.

17 Q. What is it?

18 A. That is one of our terms of service.

19 Q. And when was this in effect and public on the website?

20 A. I believe at the time of the attack, if not sooner.

21 Q. Just in terms of dates?

22 A. Oh, this was published, I believe, sometime in 2021.

23 Q. And what period was it on the website through?

24 A. It would have been there during the time of the attack or a
25 very similar version.

O4AVEIS5

Hermida - Direct

1 MR. BURNETT: All right. The government offers 872.

2 MR. GREENSPAN: Objection, your Honor.

3 THE COURT: The objection is overruled.

4 GX-872 will be admitted.

5 (Government's Exhibit 872 received in evidence)

6 MR. BURNETT: All right.

7 Let's publish this for the jury, please.

8 Q. Just to orient everyone, what is this document?

9 A. This is a copy of our terms of service, which would have
10 been in effect at the time of the attack.

11 Q. And would this have been public on the Switchboard website
12 at that time?

13 A. Yes. And it specifically would have been public in two
14 places: One, when you access the site, there is a link that
15 says "Terms of Service" on the bottom. And number two, when
16 you actually went to go use the application or, say, create a
17 feed, it required you to accept the terms of service as part of
18 that.

19 Q. Now, if you look at the third paragraph down, in all caps
20 that begins "by using," mind just reading that there?

21 A. Yup. "By using the website or our services, you accept and
22 are bound by these terms and conditions."

23 Q. All right. And if we could go ahead to page 5.

24 Do you see there's a section titled "Prohibited Uses"?

25 A. Yes.

O4AVEIS5

Hermida - Direct

1 Q. Could you read not the bullets, just the paragraph under
2 "Prohibited Uses"?

3 A. Yup. The user may access or use the website and the
4 services only for lawful purposes and in accordance with these
5 terms of use. The user agrees not -- sorry. The user agrees
6 not to use or access the website or the services for blank.

7 Q. We could go to the next page under -- still under
8 "Prohibited Uses." Do you see it begins "Additionally"?

9 A. Yes.

10 Q. If you could read "Additionally" and the first bullet below
11 it.

12 A. "Additionally, the user agrees not to, in relation to the
13 website and the services, be likely to deceive or defraud any
14 person, including without limitation, providing any false,
15 inaccurate or misleading information with the intent to
16 unlawfully obtain the property of another or to provide
17 knowingly reckless or false information in a way that causes
18 inaccuracy among the feeds or the services."

19 Q. All right. So let's take this terms of service down. And
20 I want to focus on Mango Markets in particular.

21 You mentioned that you're familiar with that platform;
22 correct?

23 A. Correct.

24 Q. How are you familiar with it?

25 A. They are a user of the Switchboard protocol.

O4AVEIS5

Hermida - Direct

1 Q. Was Mango Markets a user of that protocol back in October
2 of 2022?

3 A. Yes.

4 Q. What kinds of products did Mango Markets use the
5 Switchboard oracles for?

6 A. For lending, borrow lend, as well as for perpetual swaps.

7 Q. Do you know some examples of the types of perpetual swaps?

8 A. Sure. So one was the MNGO perpetual swap.

9 Q. So let's focus on that MNGO perpetual. Is it okay if I
10 call it the Mango perpetual?

11 A. Sure.

12 Q. Were you involved in creating the oracle that was used for
13 the Mango perpetuals?

14 A. I say "we" as Switchboard Technology Labs, yes, created it
15 in consultation with the Mango Labs team.

16 Q. And what sources did the group select as inputs for the
17 Mango perpetual oracle?

18 A. Sure. So there were three primary sources at the time:
19 Ftx.com as one of them; the MNGO USD feed; AscendEX; the
20 MNGO/USDT feed, times a normalizer to convert it to USDC; and
21 then lastly, the Serum MNGO/USDC market.

22 Q. All right. So let's walk through each of those one at a
23 time.

24 So the first one you mentioned was FTX; correct?

25 A. Correct, a centralized exchange.

O4AVEIS5

Hermida - Direct

1 Q. And what cryptocurrency pair did the oracle rely on from
2 FTX?

3 A. The MNGO/USD pair.

4 Q. And in the context of FTX, what did "USD" mean?

5 A. FTX at the time and up until the end, would use USD as a
6 catchall for all stablecoins. So, for example, if you sent
7 USDC to FTX, it credited that as one for one with USD, and had
8 unified USD markets not, say, USDC markets.

9 Q. Now, the next exchange was AscendEX; correct?

10 A. Correct.

11 Q. What's AscendEX?

12 A. AscendEX is a centralized exchange, also not too dissimilar
13 from FTX in that context.

14 Q. What cryptocurrency pair did the oracle rely on from
15 AscendEX?

16 A. The MNGO USDT feed.

17 Q. And is that Tether?

18 A. That is Tether, correct.

19 And just to clarify there, it was normalized to USDC
20 by the oracle network.

21 Q. Can you explain what you mean when you say it was
22 normalized to USDC?

23 A. Sure. So the value of USDT fluctuates in USD or USDT
24 terms, not by a lot, but, you know, can be a few basis points.
25 And so the normalizing was to ensure uniformity around those

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Hermida - Direct

1 various sources.

2 Q. And the final source you mentioned was Serum; is that
3 correct?

4 A. Correct.

5 Q. And what cryptocurrency pair did the oracle rely on from
6 Serum?

7 A. Correct. So Serum was a decentralized exchange and it
8 relied on the MNGO/USDC pair.

9 Q. All right. So the oracle would take the inputs from those
10 three sources, and how did it work to select a oracle price
11 from those three sources?

12 A. Sure. So -- and again, I want to clarify that this is
13 specifically the MNGO V1 USD feed.

14 It would collect -- each node would ping incorio (ph)
15 sources. And each node would return a median. The network
16 would return a median of all the node results and then relay
17 that result on-chain.

18 Q. Okay. So let's break that down, because there are a couple
19 medians involved there.

20 So you mentioned that first it would ping each of
21 these nodes. Is that each of these exchanges?

22 A. No. So each node is one instance or one oracle. The
23 oracle network is a group of nodes, and each of those return
24 their own results. And then the program would take the median
25 of all of those results returned to then publish that result

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Hermida - Direct

1 on-chain.

2 Q. Okay. So walk through -- what's the first step -- what
3 data gets drawn from a centralized exchange like FTX?

4 A. Sure. So in this case it was typically the median of the
5 best bid, best ask, and last traded price, or some combination
6 of that. And then that was being relayed -- or that formula,
7 if you will, was being used for every exchange.

8 And then the median of that result on each node was
9 then being taken. And then the median of those results were
10 then being taken before it was relayed on-chain.

11 I know for the audience this may be a bit confusing,
12 but just think of it like this: Every node returned one
13 response or one result. And then the network would take the
14 median of all those responses to come to the price that would
15 actually be relayed on-chain.

16 Q. And what was the reason for taking first the median of
17 different prices on an exchange, and then the median across
18 three different exchanges?

19 A. Yup. So the goal again was to provide redundancy and
20 ensure that there was some form of price that fairly
21 represented the spot market at that point in time.

22 Q. Now, I want to take a step back outside of these medians
23 for a minute.

24 What was the rationale for choosing the three
25 exchanges that your group did, so for choosing FTX, AscendEX,

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Hermida - Direct

1 and Serum?

2 A. Yup. So, broadly speaking, the goal was to ensure that
3 whatever index was being used to represent the spot market was
4 accurately reflecting where price discovery was happening.
5 That is to say, so it could have the best or sort of truest
6 representation of the price at that point in time.

7 Q. And were there particular features of the centralized
8 exchanges, like FTX and AscendEX, that factored into the
9 decision to choose those as price sources?

10 A. Yes. So number one was liquidity and convenience.
11 Liquidity by far and away is the most important consideration.

12 But one of the things that drives a lot of liquidity
13 to centralized exchanges is also the assumption that
14 centralized exchanges as regulated entities maintain fair,
15 orderly, and efficient markets. And as such, there is at least
16 the implicit assumption with regulated centralized exchanges
17 that typically what's happening and occurring on there is
18 organic price discovery.

19 Q. And what about those exchanges gave you the impression that
20 there would be fair and efficient markets, as you described
21 them?

22 A. So again, one of them was the fact that they were
23 regulated. But another is also just as a liquid large venue,
24 that there were other market participants there that could
25 arbitrage prices and bring things into equilibrium. And also

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Hermida - Direct

1 that there was some level of, let's call, it anti-manipulation
2 protection there, such that the actual activity and trading
3 activity that was happening on those centralized exchanges was
4 organic demand.

5 Q. So I want to shift gears now and focus on a particular day,
6 October 11th, 2022.

7 Do you recall anything happening with the oracle for
8 the Mango perpetual that day?

9 A. Yes.

10 Q. What happened -- or what, if anything, did you notice about
11 how the price changed for the Mango perpetual that day?

12 A. Yup. So in the early evening of that day, we received --
13 or at least I received many pings, calls, and alerts about an
14 unusual rise in price in the price of MNGO/USD on our oracles,
15 as well as the oracle sources.

16 Q. Did you, yourself go and look at how the price for the
17 Mango perpetual had changed?

18 A. Yes. Well, at that point in time I just immediately
19 observed that there was unusual activity there and rushed to my
20 computer.

21 Q. What did you see about the price when you rushed to your
22 computer?

23 A. There was unusual activity. Specifically, the price had
24 risen from approximately four cents to approximately 45 cents
25 in the span of ten to 20 minutes.

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Hermida - Direct

1 Q. Was that a typical price change for what you'd seen in the
2 past with the Mango perpetual?

3 A. No.

4 Q. And how did it compare? Just give the jury a sense.

5 A. That was an insane outlier. I would have to go run in to
6 do statistical calculations, but something that we had never
7 noticed before, and certainly was unusual for the size of the
8 MNGO market at that point in time.

9 Q. Now, you mentioned that you rushed home to your computer;
10 correct?

11 A. Yes.

12 Q. What, if anything, did you do to investigate when you got
13 home?

14 A. Sure. So upon learning of what had happened, we
15 immediately convened in a war room with our security auditors,
16 as well as folks from the Mango team, and tried to diagnose
17 what had happened.

18 The first thing and thought in our head was that, you
19 know, potentially it was an issue with our oracle network. So
20 we quickly cross-checked and compared the prices that were on
21 the exchanges, as well as the prices that our nodes relayed
22 on-chain.

23 Using that and reviewing logs, we were able to
24 relatively quickly determine that actually the oracles were
25 relaying the unusual activity and the unusual prices that were

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Hermida - Direct

1 on those centralized exchanges and decentralized exchanges.

2 Q. Can you explain what you mean when you say the oracle was
3 relaying unusual activity that was on the other exchanges?

4 A. Sure. So oracles and, as I described, when calculating
5 that price earlier, they rely on the sources to compute that.
6 And if the sources are displaying unusually high or unusually
7 unusual activity or unusual prices, it will relay those unusual
8 prices and compute the index based off that.

9 And one thing I also just want to highlight is, you
10 know, given how high and how much activity there was on those
11 sources there, and how unusual it was, even if the oracle was
12 configured differently, there still would have been unusually
13 high prices relayed on-chain.

14 So from a configuration perspective, you know, it's
15 only going to reflect what those sources are determining. But
16 if the sources are bad, then the results will also be bad.

17 MR. BURNETT: No further questions, your Honor.

18 MR. GREENSPAN: Your Honor, can we have a brief
19 sidebar.

20 THE COURT: Yes, you may.

21 (Continued on next page)

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Hermida - Direct

1 (At sidebar)

2 MR. GREENSPAN: Your Honor, we just wanted to request
3 a similar instruction on terms of service, a limiting
4 instruction similar to the one you had given to previous terms
5 of service, about the Court is going to instruct you on the
6 law. And legal definitions you heard here are not to be taken
7 as the law.

8 THE COURT: That's fine. Give that after you're done
9 or would you like me to give that now?

10 MR. GREENSPAN: I guess we have to find the text for
11 it, but we prefer it now.

12 MR. BURNETT: I'm only pausing because the text, I
13 think, for the last one we did was specific to manipulation,
14 which doesn't show up in these terms of service.

15 THE COURT: Well, I think these terms refer to
16 unlawful --

17 MR. BURNETT: I don't object to the instruction, just
18 the wording.

19 THE COURT: I do need the wording that the parties had
20 agreed to.

21 MR. KLEIN: We have a transcript.

22 THE COURT: Can you pull that -- can you go get it
23 right now?

24 MR. GREENSPAN: Yeah, give me a moment.

25 THE COURT: While we're doing that, do we have

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Hermida - Direct

1 agreement on Exhibit 115 and 116?

2 MR. BURNETT: So I got an email apparently --

3 MS. MARTABANO: I think we will reach agreement on
4 116. I think on 115, when we spoke the other day, I had asked
5 what it was relevant to and what they wanted in a stipulation.

6 As we said, we didn't understand the probative value
7 of that document. So he said initially to me in court the
8 other day, it's for the retail commodity exception, which as I
9 understand, that's out based on your Honor's rulings from
10 earlier; that USDC is not going to be considered a commodity.

11 I'm happy to entertain a different proffer, but we
12 would stip to the ownership of the wallet mentioned in that
13 chat. But otherwise, the chat is talking about a potential
14 bank purchase by Mr. Eisenberg between a totally different
15 party. And it includes a mention of proof of funds. But I
16 don't understand why that particular message would be relevant
17 to this case as it's currently charged and where things stand.

18 So I think we're still happy to stipulate to ownership
19 of that wallet, but I don't understand what else the government
20 needs or why the chat, which is otherwise not about this case
21 at all.

22 THE COURT: I did not understand either the probative
23 value or the prejudice from Exhibit 115. So do you need it?

24 MR. BURNETT: Sure. So we need it to establish
25 ownership of the wallet. Happy to entertain a stipulation on

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Hermida - Direct

1 that. We've never received one, the witness is about to go on.

2 MS. MARTABANO: If it's just ownership of the wallet,
3 we're happy to stipulate to that.

4 THE COURT: Just read it in.

5 MR. BURNETT: I just don't have anything to read in.

6 THE COURT: Can you just scribe it out? The parties
7 stipulate that --

8 MS. MARTABANO: Yeah, that's fine.

9 THE COURT: Mr. Eisenberg was owner of wallet X.

10 MS. MARTABANO: Do we need that to go in before we end
11 today?

12 MR. BURNETT: Yes.

13 MS. MARTABANO: Okay. All right.

14 THE COURT: Anything else while we're standing here?

15 MR. DAVIS: Nope.

16 MS. MARTABANO: Just so your Honor knows, I anticipate
17 that we'll agree on 116. What we've done is they had initially
18 provided a huge 170-page exhibit. They revised that to an
19 11-page exhibit. We just want to add the three pages that
20 preceded messages on the same day that reference the documents
21 he's talking about, and include a contract that was attached to
22 that document.

23 THE COURT: On 116?

24 MS. MARTABANO: On 116.

25 THE COURT: Okay.

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Hermida - Direct

1 MS. MARTABANO: I think they will agree, but if they
2 don't, our argument is both for rule of completeness and
3 Ms. Huang in her opening yesterday seemed to suggest that
4 Mr. Eisenberg had used a Ukrainian woman's account in a way
5 that sounded like she had not authorized it.

6 THE COURT: Can you email us the actual exhibit that
7 you're proposing --

8 MS. MARTABANO: Yes.

9 THE COURT: -- so I can take a look at it.

10 MS. MARTABANO: Yes, your Honor.

11 THE COURT: Okay.

12 MR. KLEIN: I hope my handwriting is legible, your
13 Honor.

14 THE COURT: All right. Thank you very much.

15 (Continued on next page)
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Hermida - Cross

1 (In open court)

2 THE COURT: All right. Thank you for your patience.
3 I'm sure you enjoy listening to the white noise. We're going
4 to try to replace it hopefully not with Muzak, but we'll try
5 and find something better.

6 Before we get started again, during the testimony, you
7 were shown a document, Government Exhibit 872, that made
8 reference to terms like "unlawful" and "fraud," the terms of
9 use document. That document and its terms were not offered to
10 define the relevant law in this case. Instead, as I've told
11 you before, I will provide you with the legal definitions of
12 those terms. And it is those definitions and only those
13 definitions that you should follow in this case.

14 All right. Good. Mr. Greenspan, you may proceed.

15 MR. GREENSPAN: Thank you, your Honor.

16 CROSS-EXAMINATION

17 BY MR. GREENSPAN:

18 Q. Good afternoon, Mr. Hermida.

19 A. Good afternoon.

20 Q. You made reference to a median price. Is it fair to say
21 that when there are three prices, the median is the one in the
22 middle, not the highest, not the lowest, but the middle one
23 between the highest and the lowest?

24 A. That's correct.

25 Q. So you said that the oracle for the Mango perpetual had

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Hermida - Cross

1 feeds from FTX, Serum, and AscendEX, right?

2 A. Yes.

3 Q. And so if there was a price for FTX, a price for Serum, and
4 a price for AscendEX, I understand that there's some
5 calculation to get to what those index prices would be, but the
6 median that the oracle spits out as the oracle price is the
7 middle price between the three, right?

8 A. It's the median of what was reported by each of those
9 nodes. Each of those nodes was calculated in the median of
10 that set price.

11 Q. Right. So FTX calculates a median price, right?

12 A. The oracle node calculates the median of FTX, AscendEX, and
13 Serum.

14 Q. Okay. And again, it's the middle -- the median is the
15 middle price; it's not the highest, it's not the lowest?

16 A. Correct.

17 Q. And it doesn't matter what the difference is between the
18 highest and the middle, or the difference between the middle
19 and the lowest, right? That would be the mean. It's just what
20 the middle one is?

21 A. Correct.

22 But just to clarify here, even if you were taking the
23 mean, it still would have given an unusually high price.

24 Q. I understand that. I'm just trying to clarify the terms
25 here so that the jury won't be confused, okay?

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Hermida - Cross

1 So you talked about Serum as one of the -- as one of
2 the inputs into this index price.

3 Serum, is that the same thing as Jupiter?

4 A. No. Serum is a decentralized exchange; and specifically,
5 it is a spot-based decentralized exchange.

6 Jupiter is a aggregator of various different
7 decentralized spot exchanges.

8 Q. And is one of the exchanges that are aggravated within
9 Jupiter, is one of those Serum?

10 A. I believe so, but it's not exclusive to Serum.

11 Q. Right. So there are other ones, but Serum is one of those
12 that's aggregated by Jupiter, right?

13 A. Correct.

14 Q. You talked about the uses for the oracle price specifically
15 relating to the Mango perpetual, do you remember that?

16 A. Yes.

17 Q. And one of the uses was to determine the settlement price
18 for the Mango perpetual; is that right?

19 A. Well, specifically, funding rights and liquidation prices.
20 Settlement price in the context of a perpetual swap may not
21 necessarily have the same meaning that people might think.

22 Q. Let's define it. So a perpetual is a bet on the future
23 price, right? So you can go long and bet that the price will
24 go up, or you can go short and bet that the price will go down,
25 right?

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Hermida - Cross

1 A. It's a derivative contract. That's one of the things it
2 allows for.

3 Q. Okay. And so in order to determine whether the price has
4 gone up or down, and whether the perpetual is profitable or
5 not, the settlement price is what determines that, right?

6 A. Again, that's -- the settlement price in this context
7 varies and it is dependent on that particular platform's
8 definitions.

9 Q. I'm talking about -- you understand that when I'm talking
10 about the perpetual, I'm talking about Mango?

11 A. Yes.

12 Q. So when the Mango perpetual, in determining whether the
13 price has gone up and a long is profitable, you look to the
14 oracle settlement price; isn't that right?

15 A. I believe it does on some predetermined period.

16 Q. Are you unsure about what the Mango perpetual does?

17 A. I'm aware of what the Mango perpetual does. But that
18 particular settlement mechanism, again, every platform and
19 every single perpetual swap exchange, if you will, whether
20 centralized or decentralized, has different specific mechanisms
21 to that.

22 Q. I take your point. That's why I'm limiting my questioning
23 to Mango.

24 I'm just trying to understand, do you understand how
25 the Mango perpetual --

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Hermida - Cross

1 A. Yes, I do. But I don't remember the specifics of that
2 particular point there.

3 Q. Okay. You talked about -- one second.

4 You talked about the stablecoins that were associated
5 with each of the exchanges that fed into the oracle, do you
6 remember that?

7 A. Yes.

8 Q. And you talked about the reporting of prices from AscendEX
9 in USDT?

10 A. Yup.

11 Q. Then you referred to that as being normalized?

12 A. Yes.

13 Q. So that's a conversion of USDT into USDC; is that right?

14 A. Correct.

15 Q. Is there some sort of table that governs that conversion?

16 A. It's determined by another price feed that has the price of
17 USDT to USDC.

18 Q. And what price feed is that?

19 A. That was a USDT to USDC price feed.

20 Q. And where is that located?

21 A. I think that was also published by Switchboard at the time,
22 and that was just one mathematical operation.

23 One thing I should also just really specifically
24 clarify here is the delta there of USDT to USDC is extremely
25 tiny and would have had zero impact, whether it was normalized

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Hermida - Cross

1 or not, in terms of the context of this and determining whether
2 or not an unusual price would have been published on-chain.

3 Q. Fair point. So USDT, at least at this time, was
4 essentially the same as USDC, which was essentially the same as
5 the dollar, right?

6 A. Close to it.

7 MR. BURNETT: Objection. It's a compound question.

8 THE COURT: Okay. Well, that's overruled.

9 And just, Mr. Hermida, when you're answering counsel's
10 questions, if you can answer yes or no, you should answer yes
11 or no. And then the government will have a chance for redirect
12 afterwards.

13 THE WITNESS: Understood. Apologies.

14 THE COURT: Okay. Mr. Greenspan.

15 BY MR. GREENSPAN:

16 Q. I believe you answered the question.

17 Do you need me to ask it again? I wasn't sure.

18 A. Can you repeat it? Sorry.

19 Q. Yeah, sure. And I'll make it simpler.

20 So you talked about -- you said that the difference
21 between USDT and USDC at this point in time was very small,
22 right?

23 A. Yes.

24 Q. And the same is true between USDC and the U.S. dollar,
25 right?

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Hermida - Cross

1 A. Yes. But one thing I should also say is for USDC and the
2 U.S. dollar, if you had access to Circle or Coinbase, you can
3 redeem it one-for-one.

4 Q. Right. So even if there was a difference, you can redeem
5 it one-for-one?

6 A. Yup.

7 Q. So when the oracle price was reported by Switchboard,
8 again, for Mango perpetuals, that was reported in USD, right?

9 A. I believe so, yes.

10 Q. Switchboard runs on smart contracts; is that right?

11 A. Well, Switchboard uses -- again, it's a combination of code
12 run on nodes, as well as smart contracts. So because an oracle
13 network has to translate and retrieve that data that's
14 off-chain and bring it on-chain, there is necessarily an
15 off-chain component that is not exclusive to smart contracts.

16 Q. But it relied in part on smart contracts; is that right?

17 A. It did in part. For specifics here, the smart contract
18 would take the responses that all the oracles submitted
19 on-chain and take the median.

20 Q. Okay. And this was open source code; is that right?

21 A. I believe business source, but I have to go back and check.

22 Q. Okay.

23 A. I believe, but let me -- I can get back to you on that.

24 Q. No need. Thank you for your willingness though.

25 A. And I should also note as well --

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Hermida - Cross

1 Q. There's no question pending. Thank you though.

2 THE COURT: He asks a question; you answer that
3 question, nothing else. And then you'll always have a chance,
4 if the government wants to, to answer further inquiries.

5 MR. GREENSPAN: Mr. Smith, if you could pull up
6 Government Exhibit 872, and this is in evidence so it can be
7 published to the jury.

8 BY MR. GREENSPAN:

9 Q. Are you seeing Government's Exhibit 872, Mr. Hermida?

10 A. Yes.

11 Q. And you remember this is the terms of use --

12 A. Yes.

13 Q. -- that you were asked about.

14 Is there a difference between terms of use and terms
15 of service?

16 A. To me, they're synonymous.

17 Q. To your knowledge. Fair enough. Thank you.

18 At the top you see it says date, and there's a
19 placeholder and it's highlighted.

20 A. Yes.

21 Q. It's undated, right?

22 A. This particular draft, yes.

23 Q. So you don't know exactly when this draft was actually
24 operative, do you?

25 A. This was the draft that was provided by our legal team in

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Hermida - Cross

1 2021, and then published on our website at some point in 2021.

2 Q. So it was at some point in '21 it was published. Okay.

3 But you don't know exactly when in 2021, right?

4 A. I would have to go back and check.

5 Q. Going down to --

6 MR. GREENSPAN: Mr. Smith, if you could highlight the
7 very top paragraph, starting "Switchboard is a brand."

8 Q. This reads: "Switchboard is a brand-new suite of
9 blockchain-oriented functionalities that is still in its
10 experimental stages. Using these functionalities may pose
11 significant risks to you and your online assets."

12 Do you see that?

13 A. Yes.

14 Q. This is a disclaimer or warning, right?

15 A. Yes.

16 MR. GREENSPAN: You can take that down. Thank you.

17 Mr. Smith, if you could pull out the acceptance of the
18 terms of use and the paragraph immediately underneath that.

19 Q. And this reads: These terms of use are entered into by and
20 between you, in parentheses, the user, and Switchboard
21 Technology Labs, Inc., in parentheses, the company, we, our, or
22 us, right?

23 A. Yes.

24 Q. And you referred to Mango several times in the direct
25 testimony as a user, right?

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Hermida - Cross

1 A. They were a user of the protocol yes.

2 Q. They were also a user under this definition, right?

3 A. I believe so, yes.

4 Q. Was Avraham Eisenberg a user of Switchboard?

5 A. Indirectly.

6 Q. Did he enter into a contract with you?

7 A. Did he ever use the site or use the explorer?

8 Q. I'm asking you.

9 MR. BURNETT: Objection. Foundation.

10 THE COURT: Overruled.

11 Q. Do you have any indication that he ever used your site and
12 agreed to these terms of use?

13 A. Well, I think -- again, I'd need to ask him, but --

14 Q. No, no, I'm asking you.

15 A. I understand. But for me to be able to determine that, I
16 would need his IP address.

17 Q. Hold on one second.

18 THE COURT: Hold on. Hold on.

19 Mr. Hermida, listen to the questions carefully. If
20 you can answer, please answer.

21 Q. And let me be clear, I'm just something for your best
22 recollection, your understanding, right. And if the answer is
23 "I don't know," that's fine.

24 To your knowledge, did Mr. Eisenberg ever agree to
25 this contract and become a user?

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Hermida - Cross

1 A. Again, to my knowledge, I don't have enough information to
2 tell you yes or no, but if he ever accessed the site, if he
3 went on the explorer, if he used the application, he would have
4 had to agree to those terms of service. So if there's an IP
5 addresses or other things that we could be provided, it's
6 possible that potentially we could go back and look.

7 Q. But you don't have any knowledge that he did, right?

8 A. Again, I don't have the other evidence here. I'm unable to
9 tell you yes or no with certainty.

10 Q. You're not able to tell me that to your knowledge whether
11 you know that he did? I'm asking to your knowledge, not in the
12 world.

13 A. Yes.

14 Q. To your knowledge did he ever --

15 A. I --

16 Q. Hold on. Just let me finish. I appreciate your
17 willingness to answer.

18 But to your knowledge, did he ever agree to this
19 contract, yes or no?

20 A. I am unable to give a yes or no because I don't have all
21 the evidence required to be able to make that determination.

22 Q. But you do know -- you do know that Mango Labs agreed to
23 this, right?

24 A. Mango did use the product, yes.

25 Q. Excuse me. I meant Mango Markets, not Mango Labs. You

O4AVEIS5

Hermida - Cross

1 know that they were a user, right?

2 A. Again, for purposes of this, I will assume yes.

3 MR. GREENSPAN: Mr. Smith, if you could go to page 5,
4 Under paragraph 9, prohibited uses. Could you just highlight
5 just the paragraph underneath that, please. Pull that out for
6 us, please. Thanks. Thank you.

7 Q. So here it says: "The user may access or use the website
8 and the services only for lawful purposes and in accordance
9 with these terms of use. The user agrees not to use or access
10 the website or the services." And then it goes on to list
11 certain ways.

12 This is limited to the user, right?

13 A. Again, the goal is for it to be as broad as possible.

14 Q. Right. But the language of it talks about the user, not
15 the world of people who haven't entered into this contract,
16 right?

17 A. In this context it says "the user," yes.

18 Q. Regarding these terms, Mr. Hermida, does someone have to
19 click to agree to these terms? How are these terms ratified?

20 A. By using the service, they agree to the terms.

21 Additionally, there's also a clicking mechanism if you go to
22 our Goody and you try to create a feed or use some of the other
23 products.

24 Q. There you have to click?

25 A. Correct. But, again, it's a catchall. If you use the

O4AVEIS5

Hermida - Cross

1 site, you're agreeing to the terms of service. So it's both.

2 Q. Mr. Hermida, you talked about the reason that FTX and
3 AscendEX was chosen as feeds for the Mango Markets oracle, do
4 you remember that?

5 A. Yes.

6 Q. And you referred to them as centralized exchanges, do you
7 remember that?

8 A. Yes.

9 Q. And you said that they were regulated, do you remember
10 that?

11 A. Yes.

12 Q. Was FTX at the time regulated by the CFTC or the FCC, to
13 your knowledge?

14 A. Again ftx.com, I don't believe so. But I believe ftx.us
15 was.

16 Q. The FTX that's at issue here, was that ftx.com?

17 A. Correct, that was .com.

18 Q. And AscendEX, was AscendEX regulated by the CFTC or the SEC
19 at the time?

20 A. Again, as an offshore exchange, to my knowledge, no,
21 provided that they were not -- or that they were complying with
22 all the relevant rules and regulations.

23 (Continued on next page)

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Hermida - Redirect

1 BY MR. GREENSPAN:

2 Q. So to your knowledge, the AscendEX we're talking about was
3 an offshore exchange; right?

4 A. Yes, same with FTX. To my knowledge, no, they were not,
5 but again, I offer that to the lawyers and other folks more
6 familiar with the specifics.

7 MR. GREENSPAN: Nothing further. Thank you.

8 THE COURT: Any redirect?

9 MR. BURNETT: Just briefly.

10 REDIRECT EXAMINATION

11 BY MR. BURNETT:

12 Q. Do you recall being asked whether the Mango perpetual feed
13 was being reported in USD?

14 A. I believe so, yes.

15 Q. It says, "reported in USD." What does that mean?

16 A. It means that the value that was being denominated in was
17 in U.S. dollars.

18 Q. As in like the way it shows up on the website?

19 A. Correct.

20 Q. In terms of the actual sources of information that it was
21 drawing from, what were the actual pairs of cryptocurrencies
22 that were getting drawn into that feed?

23 A. Again, FTX.com, USD; AscendEX, USDT; and Serum, USDC.

24 MR. BURNETT: Thank you. No further questions.

25 MR. GREENSPAN: Nothing further.

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Molina - Direct

1 THE COURT: Thank you very much, Mr. Hermida.

2 THE WITNESS: Thank you, sir.

3 (Witness excused)

4 THE COURT: Government may call its next witness.

5 MR. DAVIS: Thank you, your Honor. The government
6 calls Nils Molina.

7 NILS MOLINA,

8 called as a witness by the Government,

9 having been duly sworn, testified as follows:

10 THE DEPUTY CLERK: Can you provide the Court your
11 first and last name and spell your first and last name.

12 THE WITNESS: Nils Molina, N-I-L-S M-O-L-I-N-A.

13 MR. DAVIS: Judge, may I proceed?

14 THE COURT: You may proceed.

15 DIRECT EXAMINATION

16 BY MR. DAVIS:

17 Q. Good afternoon, Mr. Molina. Where do you work?

18 A. FTX U.S.

19 Q. Thank you very much. What is FTX U.S.?

20 A. It was an exchange for buying and selling crypto targeted
21 at U.S. customers.

22 Q. When did you start working for FTX?

23 A. Around September or October of 2021.

24 Q. What kinds of things did you do as an employee for FTX?

25 A. I was a software engineer. So I implemented features for

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Molina - Direct

1 the FTX U.S. exchange and for FTX.com.

2 Q. Are you familiar with FTX's database?

3 A. Yes.

4 Q. How are you familiar with it?

5 A. I developed code that worked with and modified the FTX
6 database. I also reviewed and debugged code that read and
7 modified the database.

8 Q. Are you familiar with FTX's practices with respect to "know
9 your customer" information?

10 A. Yes.

11 Q. Mind if I call it KYC?

12 A. You can call it KYC, yes.

13 Q. How are you familiar with that?

14 A. I developed, reviewed, I debugged code, which implemented
15 the KYC process and read KYC data, and modified KYC data for
16 users.

17 Q. Are you familiar with FTX's trade data and account data?

18 A. Yes.

19 Q. How are you familiar with that?

20 A. I developed code that analyzed, read, and modified account
21 and trade data. I also reviewed code and debugged code that
22 did that for FTX.

23 Q. As part of its regular business, did FTX record and
24 maintain data about the trades that happened on its platform?

25 A. Yes.

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Molina - Direct

1 MR. DAVIS: Your Honor, may I approach?

2 THE COURT: You may.

3 Q. Mr. Molina, I just passed you two discs. Do you recognize
4 those discs?

5 A. Yes.

6 Q. Can we start with the one labeled Government Exhibits 1200,
7 1220, and 1235. Do you see that?

8 A. Yes..

9 Q. Did you review those discs before today?

10 A. Yes.

11 Q. Did they contain those government exhibits?

12 A. Yes.

13 Q. Can you explain to the jury what those exhibits are at a
14 high level.

15 A. They contain trades and orders for the Mango coin and for
16 Mango perpetual futures for FTX.com.

17 Q. How was this trade data originally produced?

18 A. Anytime a user created an order on a market, it would
19 immediately be added to a database table called orders. That
20 contained the orders data. Also, second, whenever a trade
21 happened, that trade would be entered into a table called the
22 fills table, which was on the FTX database, and that contained
23 the trade data.

24 Q. How do you know that?

25 A. Because I reviewed code that performed these operations,

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Molina - Direct

1 and I also debugged code and implemented code that analyzed
2 those tables. I also personally looked at those tables in
3 order to do that.

4 Q. And when about would this data be entered into FTX's
5 system?

6 A. So, for the orders data, that would be entered at the same
7 time as an order was created, as an order was created on the
8 market. For the trades data, that would be entered at the same
9 time as a trade happened.

10 Q. And how often did FTX keep this trade data?

11 A. Continuously.

12 Q. Where was this trade data maintained?

13 A. This trade data was maintained in the FTX database.

14 Q. And was it created, made, and kept in the course of FTX's
15 regular business activity?

16 A. Yes.

17 Q. Are these true and accurate copies of the trade data that
18 FTX kept in the course of its regular business?

19 A. Yes.

20 MR. DAVIS: The government offers 1200, 1220, and
21 1235.

22 THE COURT: Any objection?

23 MR. GREENSPAN: No further objection.

24 THE COURT: Those documents will be admitted.

25 (Government's Exhibits 1200, 1220, 1235 received in

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Molina - Direct

1 evidence)

2 Q. You have a second disc there.

3 A. Yes.

4 Q. Does that disc contain Government Exhibits 1202 through
5 1219, 1246 to 1249?

6 A. Yes.

7 Q. Did you review those before today?

8 A. Yes.

9 Q. What are those Government Exhibits, at a high level?

10 A. They contain KYC documents for a select list of users. And
11 they also contain user and account data for a select list of
12 users.

13 Q. How was this information originally produced?

14 A. The user and account data was stored in the FTX database
15 similar to the data we discussed earlier, and the KYC documents
16 were stored in FTX services to store KYC documents.

17 Q. How do you know that?

18 A. Because I developed, reviewed, and debugged code, which
19 read and modified user account data, and also which read and
20 modified the KYC document data.

21 Q. When approximately would this data be entered into FTX's
22 system?

23 A. The user account data would be entered or modified whenever
24 the user account data changed for the user, such as when they
25 made a new account or the account information changed. The KYC

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Molina - Direct

1 documents would be uploaded to the FTX service when they were
2 submitted by the user as part of their KYC submission.

3 Q. How often did FTX keep this data?

4 A. Well, it was kept the entire time the exchange was running.

5 Q. Where was this data kept?

6 A. The user and account data was kept -- that I discussed was
7 kept in the FTX database, and the KYC documents were kept on
8 FTX services.

9 Q. Did FTX create, maintain, and keep this data in its regular
10 conducted business?

11 A. Yes.

12 Q. Are these government exhibits true and accurate copies of
13 the account data and KYC data that FTX maintained as part of
14 its regularly conducted business?

15 A. Yes.

16 MR. DAVIS: The government offers Government Exhibits
17 1202 to 1219 and 1246 to 1249.

18 MR. GREENSPAN: Your Honor, may we have a brief
19 sidebar on this?

20 THE COURT: Yes, you may.

21 (Continued on next page)

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Molina - Direct

1 (At the sidebar)

2 MR. GREENSPAN: Your Honor, some of these exhibits
3 weren't in the list that we were told about last night. So it
4 just didn't match up.

5 MR. DAVIS: That might be just a mistake on my end.

6 MR. KLEIN: We figured it might be.

7 MR. DAVIS: It might just be a mistake on my end, your
8 Honor.

9 THE COURT: Which ones are --

10 MR. DAVIS: Sorry. It should be 1215, 1216, 1217,
11 1218, 1219 and 1248; right?

12 MR. GREENSPAN: Yeah.

13 MR. DAVIS: That's what should be offered.

14 MR. GREENSPAN: Not 1246 or 1237?

15 MR. DAVIS: No, my exhibits were off.

16 THE COURT: Okay. You can do it over.

17 MR. DAVIS: I'm sorry, Judge.

18 THE COURT: That's okay. Let's go.

19 (Continued on next page)
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Molina - Direct

1 (In open court)

2 MR. DAVIS: Judge, I made a mistake in offering more
3 exhibits. The foundation was the same, but if I could withdraw
4 my prior offer and offer Government Exhibits 1215, 1216, 1217,
5 1218, 1219, and 1248.

6 MR. GREENSPAN: No further objection.

7 THE COURT: No objections, right?

8 MR. GREENSPAN: No objections.

9 THE COURT: Those exhibits will be admitted.

10 (Government's Exhibits 1215, 1216, 1217, 1218, 1219,
11 1248 received in evidence)

12 BY MR. DAVIS:

13 Q. I want to turn back to the data discs. So disc 1 that we
14 talked about. What types of trades on FTX are included in this
15 data?

16 A. Trades in the data -- trades in the spot Mango coin are
17 included in that data.

18 Q. Perpetual trades included in that data, as well?

19 A. Yes, on the disc, yes.

20 Q. How are these trades reflected in the data, what
21 cryptocurrency pairs are referenced?

22 A. For the spot market, one side of the trade is the Mango
23 coin and the other side of the trade is labeled USD, and for
24 the perpetual it's Mango perpetual position.

25 Q. And when you say labeled USD, why do you say labeled USD?

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Molina - Direct

1 A. The reason I say that is because -- so the spot trade --
2 the spot trades involving spot Mango to USD, they modified the
3 user's USD balance or the balance labeled USD, and this USD
4 balance could either be deposited or withdrawn as U.S. dollars
5 to a Fiat bank account or it could be deposited or withdrawn as
6 a USD equivalent crypto coin such as USDC.

7 Q. So is USDC reflected as USD on FTX?

8 A. For the purposes of trades and account balances, yes.

9 Q. What time zones is the data presented in?

10 A. UTC.

11 Q. And from the data in these exhibits, are you able to tell
12 information about the amount of Mango trading on FTX at a
13 particular point in time?

14 A. Yes.

15 Q. Are you able to tell about the timing of that trading?

16 A. Yes.

17 Q. Could you learn about the volume of the trading in Mango on
18 FTX?

19 A. Yes.

20 Q. What about the prices of those trades?

21 A. I could see the price on the FTX market.

22 Q. So let's switch now to the second disc, the KYC and user
23 data disc.

24 First off, what is KYC generally? Can you explain
25 that to the jury.

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Molina - Direct

1 A. In order to deposit trader withdraw on FTX U.S. or FTX.com,
2 a user would need to submit personal information about
3 themselves so that we know who is doing it and so that we can
4 know the customer that is doing those trades. So submitting
5 your personal information was a required part of using the
6 platform.

7 MR. DAVIS: Judge, may we approach for two seconds?

8 THE COURT: You may.

9 (Continued on next page)

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Molina - Direct

1 (At the sidebar)

2 MR. DAVIS: I think I was initially right with the
3 government exhibits I needed to introduce. If the defense
4 would like five minutes to adjourn to look at them and make
5 sure that they're okay with them, the foundation is the same.
6 I'm just --

7 MR. TALKIN: Why don't you admit it and sort it out
8 later?

9 MR. KLEIN: Hold on a second.

10 MR. TALKIN: We can sort it out.

11 THE COURT: Let me ask you a question. How are we
12 doing in terms of timing?

13 MR. DAVIS: I'm going to be done with this witness in
14 ten minutes. I just need to make sure the exhibits are in I
15 think my initial set, which is 1202 to 1219 and 1246 to 1249.

16 THE COURT: There's a problem here. Those documents
17 haven't been furnished to the defense. They were identified in
18 last night's --

19 MR. DAVIS: When I identified which ones, I must have
20 left this off the email.

21 THE COURT: Well, the 10 minutes is not going to hurt
22 us. So, I mean, what we can do is simply adjourn a little
23 early today, get started in the morning, and then we'll be in
24 the same shape, the only difference will be that this witness
25 will have to come back tomorrow. Is that going to be an issue?

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Molina - Direct

1 MR. DAVIS: Other than me feeling terrible, no.

2 THE COURT: Don't feel terrible.

3 Now, if it's something that you think you can get
4 resolved in a couple of minutes --

5 MR. DAVIS: Can we get it resolved?

6 MR. KLEIN: Sorry. I'm not trying to be difficult. I
7 just don't want to rush us at the end of the day. We've got to
8 talk to our client. I'm not trying to be difficult.

9 MR. DAVIS: I know you guys objected to all the
10 exhibits, but they've been authenticated.

11 THE COURT: I think it's fair that, with their client,
12 they need to have that discussion. We'll end a little bit
13 early today, unless you have other questions you want to go
14 through.

15 MR. DAVIS: No. Let's get the exhibits set.

16 MR. KLEIN: Can you write them down for us?

17 THE COURT: Let's pick this up. I don't want the jury
18 to wait.

19 (Continued on next page)

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Molina - Direct

1 (In open court)

2 THE COURT: Okay. Well, we are making such amazing
3 progress that we are going to stop a little early today and
4 we'll pick back up at 9:00 a.m. tomorrow. So be here at
5 8:45 a.m. Everyone's doing great. We're going to work on a
6 few things to help streamline things moving forward.

7 Again, I'll give you the same instructions that I gave
8 you before that I gave you a million times. Don't talk about
9 this case with each other or with anybody else. Don't do any
10 research about the case. Don't look up anything about it.
11 Don't let anyone approach you and talk about the case. Leave
12 your notepads in the back. Don't even eat mangos, okay,
13 nothing. You can eat mangos, it's okay, but we'll see you back
14 here at 8:45 a.m.

15 (Continued on next page)

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Molina - Direct

1 (Jury not present).

2 THE COURT: Mr. Molina, you're going to come back
3 tomorrow, so you'll still be under oath. You can't talk to
4 anyone about your testimony or about this case, including
5 anyone on the government's side. We'll see you here tomorrow.
6 Thank you very much. You can leave the stand. And I think
7 that's a free water if you want any water, grab it if you want.
8 And you can just take your things. Leave those discs there and
9 you can exit the courtroom. Thank you very much. See you
10 tomorrow.

11 (Witness not present)

12 Okay, so we will pick up with Mr. Molina tomorrow.
13 And then Mr. Davis or Mr. Burnett or Ms. Huang, who are we
14 going to hear from next?

15 MR. BURNETT: So, after that will be Special Agent
16 Kudirka, then Special Agent DeCapua, and then Dr. Mordecai. My
17 guess is depending on the length of the cross for Dr. Mordecai,
18 that is apt to take us through the day.

19 THE COURT: Do you mind finishing the story for us,
20 who else do we have? What I want to make sure is we're still
21 on pace for the government to rest by the end of this week.
22 That's not going to happen, that's fine, I just want to figure
23 it out.

24 MR. BURNETT: That's still our understanding. I think
25 right now, our best guess is that the folks after that will, in

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Molina - Direct

1 some order -- and I'm saying "some order" because travel matters
2 for people and things like that -- it would be McCollum, Casey,
3 Tonkin, La Grange, and we need to have a discussion about
4 Mr. Durairaj.

5 THE COURT: Okay. That's a lot of witnesses. I'm
6 assuming a lot of these witnesses are just coming up for
7 10 minutes.

8 MR. BURNETT: I think Tonkin, McCollum, Casey are each
9 under half an hour, probably more like 15 minutes. Same with
10 you Kudirka, that's like 5 minutes, 10 minutes. A lot are
11 quick.

12 THE COURT: Understood.

13 As to exhibit 116, is there any remaining issue there?

14 MR. BURNETT: I just have to check the email. I
15 haven't had a chance to read it yet.

16 THE COURT: Try to work it out so that we don't have
17 to have part 3 of the saga of exhibit 116.

18 MR. BURNETT: Only other thing on that is we still
19 don't have -- if there are going to be completeness things on
20 search histories and other things like that, we really do need
21 them because we can't know what's going to come in or if we
22 need to edit exhibits, we need time to do that. So we do need
23 it from defense if --

24 THE COURT: Let's get those sent over because we need
25 time, we have a lot of witnesses and the Court wants to make

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Molina - Direct

1 sure to be able to devote time to reviewing the additions. I
2 would prefer not to do what we did this morning, which is me
3 sitting here opening documents for the first time and hearing
4 the nature of the objections, if any, for the first time. So
5 if we can do that a little bit earlier, I'd appreciate it.

6 So we have the 116, we'll hopefully resolve that,
7 completeness issues.

8 What else from the government's perspective and then
9 we'll turn to the defense.

10 MR. BURNETT: I don't think anything else from us.

11 THE COURT: Mr. Talkin.

12 MR. TALKIN: Yes, your Honor. Just quickly on the
13 Mango matter. I've been informed that the three outstanding
14 documents from December, based on your modified ruling today, I
15 think that solves that issue. I thought I heard there was some
16 other documents, I'm trying to sort that out. Once that gets
17 sorted out, then I think we are there at the end of that issue.

18 THE COURT: In terms of Mango Labs?

19 MR. TALKIN: Mango Labs.

20 THE COURT: Understood.

21 Anything else from the defense side?

22 MR. TALKIN: One second, your Honor.

23 (Pause)

24 As long as the counsel for Mango is going to be here
25 tomorrow, there's nothing to talk about right now, and they

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Molina - Direct

1 just assured me they're going to be here.

2 THE COURT: I take it that's not because -- I'm happy
3 to hear it now.

4 MR. TALKIN: I am not going to relitigate any of the
5 issues we have heretofore.

6 THE COURT: I take it the parties are meeting and
7 conferring and trying to resolve things without court
8 intervention, and that's the reason to pick up things tomorrow.

9 MR. TALKIN: Yes.

10 THE COURT: Anything else from defense?

11 MR. TALKIN: No. Thank you, your Honor.

12 THE COURT: One additional thing, which is if the
13 parties can put in an updated exhibit list identifying the
14 exhibits that had been admitted into evidence, the Court would
15 appreciate that, just to make sure that we can crosscheck our
16 list with the parties' list and we're not missing anything.
17 That would be helpful. You have the form that the Court uses.
18 So if the parties can do that and submit it in, then we'll have
19 the official of what's been admitted. We'll make sure if there
20 are any discrepancies, that we'll handle that.

21 MR. KLEIN: Your Honor, do you want us to add ours on
22 the government's so it's just one form?

23 THE COURT: If you can do that, that would be great.

24 MR. KLEIN: If they send us theirs, we can just add
25 ours.

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Molina - Direct

1 THE COURT: If that's going to take additional time,
2 I'm happy to take separate lists. I just need to know what's
3 in and that the parties have agreed.

4 MR. BURNETT: Your Honor, one thing to get ahead of
5 something that might take a little bit of time. What's your
6 practice on whether you send indictments back or not, in case
7 we need to agree on some kind of trial indictment to go back to
8 the jury.

9 THE COURT: I was planning to send it back. Is there
10 any objection to that?

11 MR. TALKIN: There may be -- yes, this might be a case
12 where we need what's called a trial indictment where there's
13 some redactions and then it's made to look like it's not
14 redacted. It's a very speaking indictment, this one in
15 particular, so there may be some objections.

16 THE COURT: Let me think about that and we'll pick
17 that up. We've got some time.

18 MR. BURNETT: Just wanted to get ahead of it because
19 it can be a whole process.

20 MR. TALKIN: We'll start the process among the parties
21 now.

22 THE COURT: We'll address it at some point. Let's
23 plan to address it after the close of the trial day tomorrow.

24 MR. BURNETT: Okay.

25 MR. KLEIN: Your Honor, do you anticipate the final

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Molina - Direct

1 charge conference? It sounds like the government might be
2 resting, what they've told us and the Court is some time first
3 part of Friday maybe. I know things can go longer, they can
4 call somebody, but I'm thinking about the earliest possible
5 time because that would affect a lot of planning on our end.

6 THE COURT: Well, there's nine witnesses, so I'd like
7 to think that we will get these done on Friday. But does it
8 make sense for us to -- I guess what I was thinking is that we
9 would have any motions either Friday or first thing Monday, and
10 then have a charge conference on Monday or, at the latest, on
11 Tuesday.

12 MR. KLEIN: We would prefer to, if there's motions and
13 Rule 29, Monday, based on that, just so we have time to sort
14 through things that happen on Friday.

15 MR. BURNETT: Just on that point, your Honor, is your
16 practice on Rule 29 to do written submissions or just do
17 something oral and reserve or decide as you see fit from there?

18 THE COURT: Well, I will certainly hear the motion.
19 If you want to put something in writing, you can, but the
20 Court's -- if there's just an oral application, that's fine,
21 too. So the Court does not expect written pleadings in
22 connection with the Rule 29(a) motions.

23 Anything else I can help folks out with in terms of
24 scheduling?

25 MR. KLEIN: No, your Honor. Just, we tried to start

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Molina - Direct

1 on time this morning. There is the regular difficulty --

2 THE COURT: No, that's totally understood. In terms
3 of logistics, I think the ball is in our court to provide
4 another round on the jury instructions because there were some
5 additional submissions related to the mixed swap instruction or
6 issues that were raised as to that instruction, there's the
7 issue of the commodity to deal with. So the Court will take
8 another pass, have that back to the parties.

9 As to the verdict sheet, we provided the parties with
10 a proposed verdict sheet. And so, if the parties have any
11 issues concerning that, they should get those back to the Court
12 so that we can try to head off issues before the charge
13 conference if we can.

14 Any issues there?

15 MR. BURNETT: Not from the government's perspective.

16 THE COURT: Not to say what are your objections now.
17 Just saying logistically.

18 MR. KLEIN: No objection.

19 THE COURT: The goal is to have everything in your
20 hands so you get it in advance so there's no surprises at all
21 when we get to the charge conference, having been at charge
22 conferences where I get a copy of the instructions and I'm
23 looking at it with two minutes' notice. I'm trying to avoid
24 that.

25 MR. KLEIN: We appreciate that greatly, your Honor.

O4ACeis6

Molina - Direct

1 THE COURT: Anything else from either side?

2 MR. KLEIN: We should assume to be here at 8:30
3 tomorrow because we'll probably have stuff to discuss.

4 THE COURT: Yes. But on that line, get those issues
5 in early so that it's not an issue of waking up in the morning
6 and then seeing that there's 10 motions. I know sometimes it
7 can't be avoided and that's fine, I understand the struggles of
8 both sides in the midst of trial, but let's try to get them
9 teed up as early as we can.

10 MR. KLEIN: Yes, your Honor.

11 THE COURT: So we'll be here at 8:30 tomorrow. Thank
12 you very much.

13 (Adjourned to April 11, 2024 at 8:30 a.m.)

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